

1. cut - 1102711-2 - Pol 4988  
(THE AMERICAN  
JOURNAL OF PSYCHIATRY)

VOLUME 104

JULY, 1947—*Dec, 1947* No. 1-6.  
*1/1/47*

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The American Journal of Psychiatry, formerly the American Journal of Insanity, the official organ of The American Psychiatric Association, was founded in 1844. It is published monthly, the volumes beginning with the July number.

The subscription rates are \$10.00 to the volume: Canadian subscriptions, \$10.50; foreign subscriptions, \$11.00, including postage. Rates to medical students \$3.00 (Canada \$3.50.) Single issues \$1.25.

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Editorial communications, books for review and exchanges should be addressed to the Editor, Dr. Clarence B. Farrar, 111 St. George Street, Toronto 5, Ontario, Canada.

Business communications, remittances and subscriptions should be addressed to The American Psychiatric Association, 1500 Greenmount Ave., Baltimore 2, Md., or to 9 Rockefeller Plaza, New York 20, N. Y.

Entered as second-class matter July 31, 1911, at the postoffice at Baltimore, Maryland, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized on July 3, 1918.



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OCTOBER

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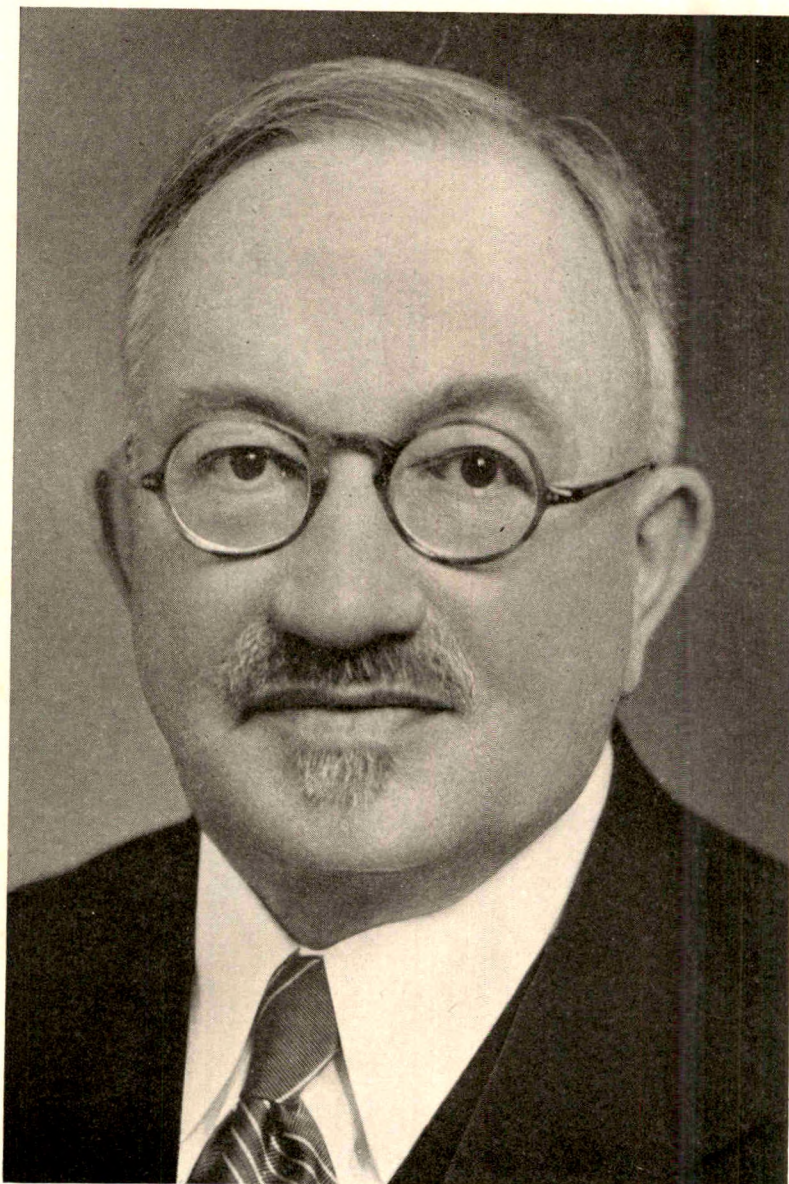
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The paper for Volume 104 was ordered for delivery from the mill in time for us to print and mail the July issue of the JOURNAL on schedule.

The present phenomenal demand for paper, shortages of and delay in receipt of raw materials, irregular summer production schedules due to workmen's vacations all combined to delay shipment to us from the mill.

The late delivery of this issue of the JOURNAL and of other work scheduled embarrasses us greatly and we hope to be able to keep to production schedules in the near future.

THE LORD BALTIMORE PRESS



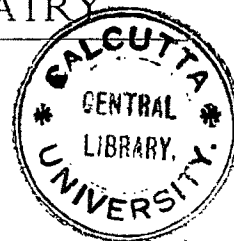
Samuel W. Hamilton

# THE AMERICAN JOURNAL OF PSYCHIATRY

## PRESIDENTIAL ADDRESS<sup>1</sup>

OUR ASSOCIATION IN A TIME OF UNSETTLEMENT

SAMUEL W. HAMILTON, M. D., WASHINGTON, D. C.



The woes of him who essays to compose a presidential address to the oldest national medical society in the United States have been set forth so vividly by my predecessors, Dr. Callender in 1883 and Dr. Blumer in 1903, that I need not impress on you the thought, the concern, the worry and the insomnia that are involved. One more terror was added when the review of all the addresses for the centennial number of the JOURNAL condescendingly used the terms ritual, pedant, humbug, platitudes, generously forgotten, uninspired, doldrums, lethargy, fog of inertia. Fortunately another 47 years may roll by before another review is written and your president as of 1947 will therefore disregard what will later be said about him by someone perhaps to be born next year. Since 1883 these addresses have been given, apparently in all seriousness. Some were historical, some prophetic, some philosophical.

A friend has pointed out that it is an especial privilege to hold this office in this exceptional period, for everything seems to be in flux. The Association is like the Mississippi when Mark Twain was a pilot; what are sturdy and respectable banks and bars today may be all washed out by tomorrow and a new course will have to be charted, midst new sands and snags. So one might discuss anything with the expectation that it was recently timely, is timely now, or will be timely by the end of the month. Let us consider first what is holding fast in Association procedure, and what is washing away.

When we gather in conclave we find ready prepared for us a mass of experience and opinion. Workers from a hundred places will tell us the story of their work, whether the work of service or the work of study. Some have views about what has been done by the Association, by the armed forces, by

the staff of some hospital, by the neighbors who have gone to prison or the neighbors who go about the streets. This have we done for more than a hundred years and though some decry it and talk of relegating such papers to subdivisions of the Association so that more time may be left at the convention for presenting a few particular orations, I hold that our usual course has been useful and should not be lightly abandoned. Said one of our most highly regarded leaders, the greatest service of the Association is to offer opportunity for free discussion. Hundreds of us go from these meetings tired but inspired, and in consequence do our whole year's work better.

A vast amount of preliminary thought comes from our committees and we will briefly review their position. At the very first meeting of the Association, 16 committees were set up. The chairmanships were divided among ten members. Dr. Brigham held three posts, Drs. Butler, Kirkbride, Ray and Stribling two each, and Drs. Awl, Bell, Earle, Galt and Woodward one each. These committees were to consider moral treatment, medical treatment, and restraint; construction, organization, and chaplains of hospitals; prevention of suicide, advantages of private treatment, autopsies, and prevention of mental disease; statistics, jurisprudence, public support; and provisions for prisoners, Negroes, idiots and demented persons. The reports of committees furnished the backbone of the program for several years; this was natural, for a committee report was mostly an essay by the chairman. Committee reports are now decried in some quarters, printed in small type and not always read. Committeemen sometimes question whether the return on their labors justifies the time they give to their responsibilities. No committee should feel offended or even discouraged when their recommendations seem to get merely a respectful hearing and no action, for if they point the right road, it will be

<sup>1</sup> Delivered at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.



traveled when someone devises a practical conveyance.

For example, some years ago the Committee on Research urged that clerical help be granted so that the committee could keep account of all research going on in our territory, give counsel and perhaps find support for promising projects. We are not a wealthy organization and never saw our way to supply that clerical help. Now the Federal Government has made psychiatric research its concern, and when the National Mental Health Council gets its funds, every research in our field will be a matter of interest, and many worthy projects will be subsidized.

Our long list of committees shows the varied interests of our membership. They number 32. Most committeemen consider appointment an honor, though some perhaps continue to serve from a sense of duty rather than choice. By spreading these duties widely, we bring more members into the work. Our officers, our special representatives and our committeemen this year include over 200 Fellows and Members. During the war we were deprived of the participation of many of our ablest members who were in military service. It has been my privilege to appoint an unusual number of recent veterans to committee posts, since they came home just before my term started. Five chairmen found it necessary to withdraw, to our regret. We were fortunate to get Drs. Chambers, French, Lewis, Tiebout and Woolley to take these posts. Two new committees are headed by Drs. Himler and Pratt.

Of these committees 12 have held a meeting—perhaps more than one—during this operating year. The tradition of the organization has been that committee meetings should be few, for they cost money. At present we are in position to authorize more of them, and I have encouraged holding meetings. I hope that you will ask your councillors to continue this policy. Of all the ways of spending our funds, even at the penalty of reducing our treasury nest-egg, this is in my opinion one of the most fruitful. The \$4,600 spent has been a good investment. Bringing a committee together does more than assure the consideration of certain items. It also enables the younger members to understand better the scope of the Asso-

ciation, its influence on what is happening in our field, and the prime fact that we do our most effective work through our individual members rather than by distant pontification—shouting at people across space.

A few committees have been set up to meet special situations and two function only for a year. These shortlived ones are the Executive Committee and the Committee on Arrangements. The Executive Committee consists of three officers and two additional councillors, and carries on the business of the Association between meetings of the Council. I am grateful for the diligence and wisdom of this year's Executive Committee. The Committee on Arrangements works with the Program Committee and the executive assistant. They have admirable plans for making your visit pleasant.

When our membership was a few hundred and salaried positions in Canada and the United States numbered only a few more, a candidate could with a few letters canvass all the desirable openings in the field. As years passed, more and more positions were set up, and in this century more kinds of positions. Even before World War I, court and clinic and penitentiary—as well as hospitals—were employing psychiatrists. That war dislocated scores of our members and attracted new men into psychiatry. From 1911 the National Committee for Mental Hygiene had been a disseminator of information about vacancies and possible candidates. After that war the National Committee engaged one of our number to help the discharged military psychiatrist find a job to his liking, and persuaded some minor hospitals to appoint men of major training to their staffs. The same problem and opportunity transpired after this war. The financial position of this Association being favorable during Dr. Bowman's presidency, we appropriated money to strengthen greatly the personnel division of the National Committee by sharing the expense of what we have called the Psychiatric Placement Service, which included a director and a secretary. Over 900 returning veterans have consulted it in person or by letter. More than 60 took positions in public mental hospitals, some in private hospitals and some in other organizations. Much the largest number wanted



training, preferably in a university clinic. We would gladly have seen 600 go into hospitals, but such was not their temper. We think our money was well invested. We shared costs with the National Committee for a year and added enough to continue their clerical help six months longer in order to integrate the new information into their files. A joint committee supervised the work and has nearly completed its mission.

Special temporary committees were appointed by request to advise with the New York State Department of Welfare and the Chicago branch of the Civil Liberties Union.

The Committee on Research is dividing the field among its members and intends to keep informed and to inform us about what is in progress. They will be particularly interested in accessible unsolved problems. A special committee was set up in the previous administration to confer with leading psychologists on the relations between their discipline and ours. This committee has proceeded with cautious wisdom and is being continued while the psychologists develop schemes for accrediting sound clinical experience. The Committee on the Legal Aspects of Psychiatry will review for you their efforts during the last five years to obtain uniformity of commitment procedures, equitable treatment of legal offenders in the armed forces and extension of the teaching of legal psychiatry in colleges of medicine and colleges of law. They will also discuss the handling of juvenile delinquency and the question of legal responsibility for criminal activity.

Our Committee on International Relationships has an extraordinarily intriguing field today, one that may baffle the wisest of us. Perhaps we must pile an international organization on top of our national associations in order to be heard in international affairs. Our committee watches this situation and Drs. Chisholm and Rees will bring us information about what impends. Another relatively young committee is that on Preventive Psychiatry, a subject about which absurd things are sometimes heard. This committee seeks the implementation of what they call a modest program, through facilities that are already available in our educational institutions, such as schools of public health and

departments of preventive medicine. The Committee on Military Psychiatry will tell you their discouragement over the conservatism of the military command and their view of great advances that are possible. The Committee on Veterans is influential in the very fine and effective program of the Veterans Administration in neuropsychiatry. Their report will inform us of progress there.

The Committee on Psychiatric Social Service maintains lines of communication all over our area and will give us current information about the state of social service in our hospitals, where standards may be good but too often are low. The Committee on Industrial Psychiatry started several years ago as a subcommittee. Its members, out of personal experience, will tell us of the great opportunities in that field and of the training and shrewd wisdom needed for the task.

Our biographical volume was published in 1941. Its usefulness has surpassed what many of us thought was possible and the supply was exhausted long before the information became obsolete. A special committee has laid plans for the compilation of a new volume. The cost will this time be greater and the book may not pay for itself as the old one did. The Council believes that it will be a sound investment in public relations and a great aid to our membership, particularly those who make appointments or seek candidates for important positions.

The Committee on Nomenclature and Statistics after several years of little responsibility now finds itself very much in the limelight because a new classification of mental diseases has emanated from the Army and is so well received that other organizations are considering its adoption. This committee, besides its own deliberations, will communicate with other medical organizations that are interested in the uniform classification, and in due time will give us their findings.

The Committee on Psychiatry in Medical Education with its customary industry has assembled facts about the teaching in our medical schools, which indeed has undergone considerable shift toward our position. This committee has had a very helpful influence on medical education. They are now considering how to put a mobile teaching group in the field. In this period when emphasis in

medical education is moving from the psychoses to the psychoneuroses, we should give every encouragement to sound and effective procedures. We do not want the medical student to come out of school with the idea that patients who respond well are the only ones worth thinking about, even though they may need more of his time than do men with severer ailments.

Our Committee on Ethics has listened to complaints and has taken up on its own initiative matters in which the reputation of members of our Association might be questioned. It is inevitable that professional men should make an error and overstep conservative practice now and then. It is absolutely unavoidable that some patient will complain of the way his affairs have been handled, and these complaints may be lodged against the most discreet as easily as against the incautious. Our Committee on Ethics takes its responsibilities with all seriousness and makes full reports to the Council; the essence of these reports is brought to the Association.

The Committee on Psychiatric Nursing has a broad stimulative influence on nursing educators in our field. Its present work can extend at least another three years through which a generous grant of the Rockefeller Foundation will continue. That Foundation happily sees high value in personal visits to the schools of nursing and accordingly we are able to have a nurse actually in the field. The committee and their representative are to be commended for the mobility they have displayed; it is more effective than writing exhortations, though of course incidental reports are a means of prolonging the effect of what has already been conveyed by word of mouth.

Our Committee on Public Education has continued its very effective work. On occasion the opinion of the Association, or the Council, or of some committee duly appointed to represent us should be recorded and heard. Indeed on such occasions our opinion and advice is not only heard but also recorded, as our newspaper clippings show. This work is often more effective because not attuned to a blare of trumpets. The loudest noise may fail to encompass the greatest wisdom. A wise man once remarked that he was not interested in turning the

steam into the whistle but was deeply concerned about having a fire under the boiler. The committee sees some progress and will again remind us that good relations are based on our records as individuals and are likely to be best when least controversial. The expense of this work to the Association is so small that we are evidently indebted to private generosity.

The Committee on Membership has a large task every year, carried out mostly just before the annual meeting. In preparation for their scrutiny of 799 applications for admission or transfer, a huge amount of correspondence is carried on by the office, and this correspondence is not infrequently reviewed by a committee member or an officer. At the instance of Council the committee has this year made a survey of the associate membership with a view to promoting to membership those who have been in our ranks for three years and who persevere in psychiatry.

The Nominating Committee, sensing a desire to change our usual practice and leave part of the sifting of candidates to the assembly rather than require the committee to do the whole process, has brought to you multiple nominations for president-elect and for councillors. We hope the members will find ways to express their opinion of this procedure. It has already been criticized; one Fellow of the Association has said he dislikes to be opposing another at the polls. Undoubtedly it was time to experiment, whatever scheme turns out to be ultimately most acceptable.

Our Committee on Program has had to do more integration of special interests than usual this year, and they have done it skillfully. The Committee on Reorganization has made a heavy contribution to the program. This committee, originally appointed in 1944, included some of our liveliest spirits and represented a segment of our membership who have won distinction in teaching, in administration, in clinic, in private practice and in military service. Following their presentation at the Chicago meeting of what the Association should be doing and how to get it done, they asked and were promised more members and more time on this year's program. You have noticed that all day Tues-

day is devoted to two series of discussions of our work and our responsibility. I need not emphasize the importance of these sessions and the interest aroused in them under the brilliant leadership of this committee. The conclusions reached will be laid before you in resolutions Thursday morning. Any action taken at that session should represent your considered judgment, so far as possible.

Another matter seemed so important as to warrant a whole session this year. The Psychiatric Foundation is a monument to the vision and pertinacity of our executive assistant, Austin M. Davies. Its purposes and almost limitless possibilities, as well as its plan of action, will be spread before you Wednesday afternoon.

Meanwhile what has become of our usual scientific program? It has suffered cuts but has come out well. Feeling sure of a large attendance in New York we have taken five days for our meetings. Because of the urgency of our special programs, men from other walks of science will not be heard this year. The chief interest of the yearly meeting—the presentation of experience and theory by our rank and file—has been somewhat reduced. It may be a little harder to hear all the papers you wish because we have more quadruplet sessions than usual, a measure necessary to forestall a serious reduction in the number of communications presented.

We had hoped to sit at clinical sessions in some of our hospitals but in the pressure of new projects to consider, that item has to be deferred to a later year. In one regard we have made a definitely better arrangement of the program: round table discussions will be held on two evenings instead of one; fewer members need be disappointed because they cannot go to two of these interesting and important conferences.

Early in its history this Association set up standards that ought to be attained by mental hospitals. Those standards had great influence. After a time the formulations became less pertinent and fell into disuse. Partly as a result of the needs of the Federal Government in providing for the veterans of the first World War, a new set of standards was adopted and found its ablest expression

in 1926 when, after a period of study by the Committee on Standards and Policies, they were presented to the Association for a year's consideration and were then adopted. They were intended as minima and in several instances have been modified and added to. They have been used effectively to bring about improvement in organization and equipment of mental hospitals in many places. No doubt further amendments will be needed and will be made. If made after due consideration and appropriately formulated, and not too rigid in detail, they will serve the mentally ill for years to come. Probably we are right in setting these standards so high that only the best supported institutions meet them all. So liberal a state as New York, for instance, did not provide quite the ratio of physicians to patients that was called for in the standard adopted in 1926, and stood farther below the later modification of that standard. On the other hand, most standards have been surpassed in various hospitals. We have succeeded in steering a middle course. Standards that can be never more than an aspiration would not be helpful to well-disposed public officials when they try to get better support for our hospitals. Standards that everybody has attained leave no room for striving.

Standards inevitably lead to questions about rating. Here we meet difficulties, and it is possible for desk workers to give formal ratings too high a value. The Mental Hospital Survey Committee staff worked a long while on the problem of ratings, but never found a satisfactory scale. The United States Public Health Service obtains information about mental hospitals and puts it to good use, but would be conservative about any scheme that would rate one hospital as number five in excellence and another as number 173. Our Committee on Standards and Policies has ambitious plans for rating the excellence of the mental hospitals of the country. They have sent out questionnaires and now have the promise of a grant from the Psychiatric Foundation to meet the expense of devising a rating scheme and doing something about it. They will need great wisdom in planning further moves in this matter.

We have designated several Fellows for

important liaison. Dr. Joseph W. Moore represents us in the American Association for the Advancement of Science. Drs. Lebensohn and Yerbury took part in the deliberations of the Inter-Society Committee on Science Foundation Legislation in February and Dr. Whitehorn represents us there. Dr. Burlingame was our delegate to the British Medico-Psychological Association. Drs. Curran and Schumacher participated in the Attorney General's conference on juvenile delinquency. Dr. William Leavitt was delegate to the annual meeting of the American Social Hygiene Association in New York and Drs. Keyes, Sands and Peatick to the American Academy of Sciences at Philadelphia.

Our JOURNAL enjoys deserved popularity and now has 2,168 subscriptions outside the membership. Among these are 87 subscriptions by medical students and interns, at half-price. It is intended this summer to begin publishing the JOURNAL monthly. In preparation for this expansion we have acquired an editorial assistant. We have raised the subscription price to ten dollars. Many in our membership have wanted more news about what is going on in psychiatry. To meet this desire the Council took tentative steps toward establishing a news sheet for a year's trial, not to compete with the JOURNAL but to supplement it. A committee was appointed and met the delay inevitable in such a project. Now the Council has decided to try for a year another plan, and get more news into the JOURNAL.

So much for our committees. Let us consider some strong and some weak points in our constitutional structure. The rising number of affiliate societies is an excellent development in the frame of the Association. The first affiliation was enacted only so late as 1934. The number of such societies grew slowly and the growth was healthy and spontaneous, no outside stimuli being applied. In 1943 when the affiliate societies numbered 11, the Council invited each affiliate to send a representative to sit at Council meetings and join in the discussions. This has worked well. The Association has made no contribution to the expenses of these delegates except a meal or two, when Council meetings ex-

tend through meal time. Five more societies have come in, and two await your decision.

Voices have been raised in favor of further elaboration. The bylaws provide for the establishment of district branches, on petition. If still more meetings and dues are wanted, this mechanism is ready. Perhaps we are doing better to ride for a while the current that is already swirling. Our members have been organizing groups according to local geography and lines of transportation, rather than with artificial boundaries. We are just receiving as affiliate a very important organization whose membership centers in New York City and includes members from parts of several states. I am sure nobody with a pair of shears would have cut out from the map a district just like that. A special committee might well study this matter.

Most of our business is handled, and well handled, by the Council. That body hears reports and passes on their fitness for transmission to the Association. It appropriates money. It expresses its will to officers and agents. It is a hardworking body of men who are earning their living at home, but giving this time and thought to their colleagues' affairs. The business has grown with the membership. Year by year a new president presides over the Association in course, and also has to preside over Council. No two presidents do it the same way. Council meetings are long and often tedious, and time is lost on matters that could be more expeditiously handled. If Council should select its own moderator, time and human effort would be saved. He might be a member of Council, but sometimes would not be. In that case, like the speaker of the British House of Commons, he would have no vote. His one job would be to get the business done in an orderly and economical fashion. Under that arrangement the president would be able to consider, to confer and to vote like other Councillors instead of being under continuous pressure to push the agenda. This change has found favor during informal discussions and notice of a suitable amendment has gone to the secretary.

Another matter needs attention. We have no constitutional provision for replacing a deceased or resigned official and might fall into serious fiscal embarrassment, with no-

body qualified to sign checks. An amendment will be introduced enabling Council to fill vacancies.

Before the war it was proposed that the president and a couple of interesting speakers should be a deputation to various parts of the country to participate in programs of related societies. The plan has merit, but it would be best to do nothing in the coming year that could be suspected of weakening our interest in the Portland meeting, for this is only the second time that the Association has placed its annual conclave on the Pacific Coast, and we wish a first-class meeting there, even better than the one at San Francisco in 1938. If the 1949 meeting be held in the East, there should be one or more meetings on the Pacific Coast for those who cannot cross the continent. A single gathering might be held at a central place such as San Francisco. Or the North Pacific Society, our members around San Francisco Bay, and our Southern California members might have separate meetings, their programs strengthened by a deputation chosen by our Program Committee. I recommend that our Coast members consider all this, and at Portland tell the Council just what they want in 1949.

In any organization of this size two trends of thought may be distinguished as the inclusive and the distributive. The typical incluser is impressed by the power of a great organization to do things the right way and to thwart those whose ideas are erroneous. He wishes to get all organizations in every part of the field under one constitution and one set of officers. He is willing to make concessions, at least temporary concessions, in order to bring in the smaller organizations. He is pained if some smaller groups are reluctant to give up their own organizations and come into the big one. In his mind's eye he sees a great body of united scientists and administrators marching shoulder to shoulder, and always in the right direction. This picture is very attractive. Very little straying off the line of march is contemplated.

The distributive type of mind likes to encourage those who have common interests to gather anywhere that is convenient and compare experience. If a group working on

a common project takes a name and elects its own officers, the person of distributive mind has no qualm. He knows that in time issues get settled, the little organization disbands or merges when its work is done, and the very fact of its continued existence—so long as it continues—is indication that there is some job for it to do. He is vastly stimulated by these minor societies to see if the big organization can devise a better scheme to meet a need; he tries one scheme and another and perhaps hits on the very thing that is wanted. But he does not insist that everybody come into the big tent and hunt for a spot in the straw. Our big corporations encourage little ones. To explore for oil or uranium, to operate country telephones, to write local fire insurance, a feeder company may be organized with an officer of the big company in command. Distribution of household gas in tanks was first done by small companies. This Association should welcome feeder societies.

During a war passions are sharpened, and those who have served together are not loath to decry their elders. We were that way after the first World War, too. Out of the war has developed a Group for the Advancement of Psychiatry, who mostly have the background of working in strong, far-spread professional bodies, the Army and Navy Medical Corps. This Group holds meetings twice a year and discusses matters very earnestly. They have committees of their own that correspond and perhaps meet between-times. The Group are proud of their committee reports. At their earnest desire and by the votes of their representatives it was decided to print some of those reports in our JOURNAL.

Those of us who are distributively minded welcome the new Group. It includes many of our best minds, and our jobs will soon be done better by those who are 20 years younger than we. We enjoy their enthusiasm and expect great things of them. We urge them not to set up machinery by which their opinion shall be given out as the opinion of the Association. No body of 4,000 physicians has offhand a single opinion on any topic, though it will pretty well agree on some things, after hearing the argument. In the present movement to set up a permanent

medical officer, many have thought of him as primarily the spokesman of the Association. When we find the money to pay the salary and office expenses of a full-time medical man, I sincerely hope that he will not be primarily a publicist, but that he will be an adjunct to the secretary's office and a representative of your Council in keeping active all our professional groups in Canada and the United States.

Our finances are set forth in detail by our treasurer. A few figures call for emphasis and only approximations will be used. We have a surplus of more than \$38,000. This has been wisely invested in savings bank accounts and government bonds. The largest increment in one year was \$5,000 and lately the average has been \$3,000 a year. Last year we had a surplus of \$2,200, this year only \$484. Even our magazine has made money for two years, \$1,000 year before last and almost \$1,900 last year. That unprecedented profit is now at an end. This year we shall lose about \$800 on the magazine. Other expenses will be higher than formerly. Our rent has been increased about \$350 a year. Printing, postage, telephone and other incidental expenses of the office are much heavier than they were, and will not go down. Our payroll has been increased by \$1,500, and we hope some day to have room for an additional worker. The office is very crowded and when we get more space it will cost more money. The conversion of the JOURNAL to a monthly will result in additional expenditure, perhaps \$5,300. Obviously our finances appear sound but they are not in such condition that broad spending is at all possible. All this will be in your minds when you consider the several plans for extending the work of this Association.

Under good management it has been possible for the Association in the last dozen years to undertake a few new enterprises. In 1946 \$5,000 was appropriated to help start the mental hospital survey. More recently we published our biographical volume and a volume on military psychiatry. Last year we shared with the National Committee for Mental Hygiene the cost of a personnel placement service. This year we are developing our publication. Shortly our Committee on Psychiatric Nursing will need an ap-

propriation. These things could not have been done save for the care with which our predecessors handled our finances. The surplus looks so encouraging that some have thought we can spend unlimited sums on any good cause, but this conclusion is not borne out by experience. It is time for decision about the sum we should keep on hand for emergencies.

Our constitution provides that the auditors shall be our Finance Committee. This provision has never been activated. We depend on our able executive assistant to do some budgeting, and to help the executive committee to move wisely between Council meetings. The growth of the Association has led to two new steps this year. First we consulted the auditors about expanding their activity into budgeting, but they are located far apart and perhaps too fixed in number. The Council decided to set up a Budget Committee to help us see how much of our money may be available for our various projects. The other move has been divorce of the offices of secretary and treasurer, which could be done without any change in the constitution. With a separate treasurer and an active Budget Committee we should be able to plan our finance easily and well. Incidentally the intolerable load carried by the secretary has been lightened. I do not see in all this any lessening of responsibility for Mr. Davies and his assistants; in them we have every confidence and on them we shall continue to lean.

The trustees of the Lester N. Hofheimer Estate propose to set up a yearly prize for outstanding contributions to psychiatric research. At their request we are devising a plan for a self-perpetuating board of award. The president will serve on the board, and when board members come to the end of their term of service, the Council will choose their successors from a list of nominations made by the board. The fund will be handled by our treasury. We are happy to have the privilege of administering such a fund, about which you will see more in the JOURNAL. We may be called on to administer another fund in the near future.

So much about associational affairs. Our affairs impinge on much that happens in the community and many results that we seek in

our practice depend even more on community interest and support than on our own efforts. Let us look at some things that are happening around us. Unhappy stories about what befalls our patients in the mental hospitals are only part of the distressing situation of today. In some states, because of lack of beds the old-age patients are not accepted in mental hospitals. Some of them go to jail, some are locked up in almshouses and others are locked up at home. To see this return of ancient abuses is especially disquieting to those of us who thought they were out of date and abolished. Perhaps as Herbert Spencer said in 1868, "We are in course of rebarbarization . . . ."

As regards treatment, a few things may be said. In our hospitals and clinics, treatment still suffers from shortage of personnel and in too many places is on too limited a scale to reach anywhere near the needs of our patients. It is too easy to fall in with the common concept that the mentally ill who come to our hospitals can be pitied but not helped, that little good can be expected from working with them, that meager care is all the situation demands, that time is only wasted if anything elaborate is undertaken. When the proposition is stated thus baldly we resent it, but nevertheless in too many hospitals as well as even in the shade of too many universities, the philosophy of our work is not on a high level, and we find someone saying, "I'm sorry, but you can't do anything for him." Much of this attitude of impatience and hopelessness comes from focusing interest on the psychoneuroses, lack of experience with the psychoses, lack of drill on doing things for our patients.

We cannot be content when so much psychiatric work is in an unhealthy condition. Some of the disorder and deficiency has grown from the inroads of the war years, but other evils existed beforehand and lately have merely been brought into public recognition. We concede the value of routine measures taken for the advantage of a patient in any decent hospital, starting with the benefit of his removal from the environment in which he got sick. In too many places the physician is overburdened and perhaps has come into our work without much training. Too many of our men have not been taught

to spend time profitably with the individual patient and therefore are reluctant to do it. Since on the whole we are good organizers, we turn over many medical functions to persons whom we train in ancillary techniques. A telephone operator becomes the admission officer; a supervisor explains the patient's status to him; an attendant gives the first reassurance; the laboratory technician crawls and examines his blood; the X-ray technician makes the chest plate and reads it; the dietitian or steward prescribes his food; and so on down the list.

If the new patient is responsive and talkative he is interrogated according to a schedule and his statements are combined into a story that is then known as a history, fixed and embalmed. A social worker or clerk interviews a relative and gets an anamnesis. Neither document is pursued in future studies. When professional men are given this arid fodder it is no wonder that they think treatment consists of sodium amytal, psychoanalysis, electric shock, frontal leucotomy, and little else. Psychoanalysis they have heard is dangerous or inapplicable to hospital patients; leucotomy they would like to learn to do; amytal they may order every night; and everybody gets electric shock unless he has aortic insufficiency. Much as one may regret it, there is too much of this sort of thing.

Being modest, our colleagues sometimes fail to understand how far they might go in giving real treatment, and so they miss some opportunities. They make certain examinations and draw inferences, but have neither the time nor the experience to pry diligently and skilfully into the roots of the patient's trouble and tactfully undermine his hostility and lead him to readjust. Our colleagues who teach need be careful not to let frothy verbiage substitute for hours of solid work with patients, and students should be so well trained that they will not get panicky when called on to examine a patient who does not talk.

Into such a medical atmosphere comes some new scheme, useful when properly applied and in need of further cautious research. Many of us are swept off our feet with enthusiasm. Before my day it was thyroid treatment. Before the First World War

came surgery of the separable organs, including the colon. After the war malaria was administered not only for cerebral lues but for many another ailment. Insulin therapy has been used for all sorts of things but not so widely as its cheaper successor, electric shock, which is administered high and low in hospital and office to an extent that is no credit to us. In sheltered environment, unpleasant occurrences after shock may be very infrequent, but we should caution our colleagues against recklessness. Lately we have called in the brain surgeon as our accomplice, and an operation that makes cheerful invalids out of patients with persistent and apparently irremediable states of mind has been employed also on psychoneurotics and on young people with functional disorders whose outcome we have no right to say is hopeless under other measures of treatment.

Individual psychotherapy should be systematized and expanded in our hospitals. Many members of medical staffs should have their time so arranged that definite periods will be free from interruption. Another physician will receive all telephone calls during the time set aside, and the superintendent will direct that even he will be reminded that this is Dr. Jones' treatment hour. Such an arrangement was made by the late Mortimer W. Raynor. Many patients would be more comfortable if given more physiotherapy. Our mental hospitals can learn much of value by studying what the late Richard H. Hutchings, Jr., brought to pass in three New York hospitals.

Our colleagues in the hospitals are not perfect, as we have admitted, and a considerable number in these days are men who have retired from general practice to enter our field without training. In many cases we have urged them to come in and do something to help. Without joining the general debate, let us remember that most mental hospital physicians among other things become well acquainted with the social problems of their patients, about which we hear so much these days. As has been pointed out by a predecessor in this office, when you tour the wards with a mental hospital staff member he tells you about one patient and another—not only about the patient's ailment but also about his background, his home, his

outside problems. As Dr. Russell said, many of these men know more than they think they know. It behooves those of us who are vocal to set right some of the current vagaries that make the situation look even worse than it is. Even in the most isolated hospital the physicians expect to know quickly about the physical ailments of their patients, and when they are well enough to go home. From that level, which implies that the doctor is shepherding several hundred more patients than he should have to, standards go up and up to those of hospitals where any patient can be assured of sympathetic understanding and wise treatment.

Construction of hospital buildings proceeds slowly. I regret that the trend is to further enlarge existing institutions until great sections become mere receptacles. It is not implied that any part of a big institution is necessarily a bad place, but opportunity for personal attention from the ward physician decreases as the institution grows, and more and more wards are lumped together under the supervision of the less experienced doctors. An objection that leads men to steer away from the superintendency of a big hospital is perhaps not mentioned to officials but can be easily elicited. The time-consuming responsibilities of that position prevent the superintendent from knowing many individual patients. The confidence displayed by his patients and their willingness to tell him freely even about private affairs is one of the greatest rewards of medical practice. Many of our colleagues have made a financial sacrifice so as to preserve this relation.

The nursing situation in many of our hospitals has been most distressing. Ingenious schemes have been employed to combat the deficiency. Patients who have recovered or who have not yet recovered have been put on the payroll at some modest figure and given considerable responsibility. In more than one place men were put on duty on women's wards and it is amazing that the complaints received have not been more numerous and bitter than they were. Such men's reputations could be badly smirched by the fantasy of an excited woman patient. Evil indeed is our dearth of nurses. In many places we are worse off now than we were 25 years ago. The trend of nursing educa-



tion has taken our pupils away; there is no use lamenting, for we do not compete successfully with the schools in general hospitals. But here are our patients—a half million in this country and some more in Canada. How shall we provide for them? They cannot wait. Without good psychiatric nursing they must perish in soul, and some in body.

We should probably tread again the steps that our predecessors took decades ago. In 1798 a course of lectures was delivered to the attendants at the New York Hospital. The attending physician started with the employees he had, and set out to improve the fitness of the workers who were already on the job. This was a fundamental project in training. In the 1870's and later, suitable attendants were given courses—mostly lectures—and at the end of about two years were encouraged to take some examinations. If they passed, they were entitled to wear a distinctive uniform and to draw an increase in pay.

At present we cannot make registered nurses of most of our attendants. Educational requirements for admission to nurse training are such that most of the candidates are recent graduates of high schools. We give courses to our attendants, and many of these courses are very practical and informative. So far as the medical lectures are concerned, they are given with the same devotion that characterized the labors of my contemporaries 40 years ago, and are often better lectures than the ones we gave. In my opinion we should do essentially the same things for our attendants that our predecessors did in the eighteen nineties. We should expand the present training course for attendants till it covers about two years, grant diplomas, and above all, follow that diploma with a quick increase in salary. Able nursing instructors stand ready to help in such a movement. Indeed New Jersey reports real progress. The few full three-year schools of nursing that we have should be continued and more if possible established, but to accomplish anything on a broad scale we must turn our eyes in other directions and cease wishful thinking.

The development of the labor movement is of consequence to all of us who are inter-

ested in mental hospitals; and indeed who can long be a psychiatrist without a very keen interest in the hospitals? Most hospitals have a union and many have two unions representing the two great labor groups. In New York State there is also an Employees Association, much older than either union and more influential. I am not decrying union activities when I say that their possibilities for good have not been thoroughly explored. Both physicians and union officials have been asked about their point of view and their interest. An important question, "What has the union done to improve the treatment of patients?" has been put to representatives of both groups. I was told in a Canadian institution that the union assumes at times a disciplinary attitude toward a careless member. When this stage is reached a real contribution can be made.

Soon we should resume insisting that fundamentals of decent care be set up in all our hospitals even though really high standards of treatment have to wait till larger staffs are found. Food and clothing, bathing facilities, a measure of privacy—particularly for women—all these topics and more need attention in too many institutions. Take the matter of food, for instance. Little deference can be offered for crudities of preparation and service to thousands of our patients. In many hospitals cooks are never paid enough to hold the good ones. Many institutions have no dietitian and others pay such a small salary that the dietitian who can be hired is not an administrator and must therefore confine her authority to the diet kitchen. The result is that good food is poorly cooked and deadly dull to eat. Dining rooms that should be places of cheerfulness and beauty are too often gloomy, noisy and disorderly spots in an institution that may otherwise be rather cheerful. Would that the tons of battered aluminum dishes that fill the pantries in many of our institutions had been requisitioned by the government for something during the war. Unfortunately the aluminum was not good enough to make airplanes and therefore we still condemn thousands of our fellow citizens to eat off that stuff. Thousands never have a knife or fork. They would use them with propriety but a great state is too poor to buy them—so it is said.

Then of course there are dark murmurs about the misuse of table utensils. Few patients would misuse them, and in the hospitals where they are supplied, they are properly handled.

Among the pleasanter features of our situation today is the participation of the government in the efforts of this Association to develop better mental hospitals. Through the generalship of our colleague, Dr. Treadway, the mental hospital survey was started almost eleven years ago with a supervising committee representing several great bodies, all the committeemen being prominent in this Association. Participation in that continuing survey has been a very great privilege. Since 1939 the U. S. Public Health Service has carried all the financial responsibility and its Mental Hygiene Division the burden of running it. More recently the Division of Tuberculosis Control has equipped many state health departments with the means of making chest surveys in our mental hospitals as elsewhere. And now for more than a year we have had the collaboration of the Division of Hospital Development, which has put an architect on our structural problems. Such a happy state of affairs we yearned for in the National Committee for Mental Hygiene 25 years ago, but Salmon and Williams were not permitted to enjoy it. Rehabilitation is the word used by the federal government to designate a new resource made available to our patients in the states and in some places already used rather well. Not without difficulty did the friends of the mentally ill get the rehabilitation law so written that persons with mental handicaps might become beneficiaries. It is now possible to send our convalescents to a place where they will be advised what kind of training will benefit them; the cost of training is then provided by the rehabilitation agency. The National Committee has embarked on a notable study to develop the most fruitful methods to use in getting such

training for our patients. All hospital men will watch that study with deep interest. I shall not discuss the benefits we expect from the National Mental Health Council, for they lie ahead.

My associates, for the honor of presiding over your sessions and sharing the work of your Council, I thank you profoundly. The courtesies shown me during this period have been quite in keeping with the dignity of this office and have moved me more than I would have cared to show. The helpfulness of my seniors and my contemporaries has been matched by the enthusiasm that many juniors have shown in undertaking the tasks to which they have been called. Let us come to united opinions when we can, but even where we divide, let no one forget that his membership is in a fine body of upright and sympathetic professional men and women.

In days when our land is full of talk about less work in return for more pay, it behooves us physicians to set a good example by making more than a fair return for our salaries or our fees—whichever supplies our livelihood. I report to you that hundreds of our colleagues are doing exactly that thing. I meet them not only at conventions but also in the wards of their institutions and in their offices and in other places where they are professionally busy. You have reason to be proud of your profession in these difficult days, and particularly of your associates in the specialty that you have chosen.

Ahead stands our most important goal—better treatment for our patients, and for all patients who are mentally ill. Much of the treatment is done by physicians personally, much by our collaborators in nursing, psychology and other skills, and much through community resources. Whatever plans we make in public or private practice, let us center every scheme on the welfare of some patient. So long as that is our method, we shall not go far astray as individual practitioners, nor as an Association.

## SAMUEL W. HAMILTON

PRESIDENT 1946-1947

### A PSYCHIATRIC PROFILE

A. A. BRILL

Of the multiform assignments that fell to my lot during my psychiatric career, none was as pleasant as the task before me. When it was suggested that I make a personal sketch of Samuel W. Hamilton as your president, I literally jumped at the idea. For I can now confess that, like many others, I expected and hoped for years to see Hamilton on the Parnassian peak of the A.P.A. It was therefore a source of great satisfaction to me to gather the material for a description of the measure of the man you have chosen as our president for 1946-47.

Hamilton and I graduated from the same medical school in 1903, and as fate would sometimes have it, our paths ran in the same direction since then. We both went into psychiatry as a medical career, we both received our training in the New York State Hospitals, and last but not least, we have not drifted apart as usually happens; on the contrary we have remained close enough now for forty-four years to observe each other's trials and pleasures with friendly and sympathetic eyes. And yet, as you will soon hear, up to the time we were thrown together in the College of Physicians and Surgeons, there were hardly two other classmates who were as far apart by background and environment as Sam Hamilton and Abraham Brill.

When I became aware of Hamilton he impressed me as a quiet, serious and self-possessed individual who like the present writer was too busy for trivialities. Yet Hamilton was quite different from the general run of medical students of his class. I never saw him in Van Glahn's beer saloon which many of us frequented during the lunch hour and on some other occasions. Later I discovered that Hamilton never drank anything alcoholic, never smoked and I never heard him use cuss words. Such singular behavior might ordinarily arouse wonderment, perhaps even some suspicion, but to my knowledge if one ever entertained such thoughts about Hamilton they were soon dispelled by

his genial and kindly behavior. Years later when I occupied myself with the problem of "transference" I often thought of Hamilton; I wondered why we were so strongly attached to him who differed from all of us in so many ways.

Hamilton and I belong to a small psychiatric club which has existed since 1914. Hamilton is one of its oldest members, its former secretary and president. At our monthly meetings we dine, drink and discuss lightly all sorts of interesting topics. I am not contradicting myself when I say that *we* dine and drink at our meetings. All of us dine and *drink* but Hamilton invariably sips ginger ale. Yet Hamilton is the seventh president which this club<sup>1</sup> has given The American Psychiatric Association in about a generation. Nor does Hamilton ever participate in the type of witty sallies regularly indulged in by the membership at their meetings, albeit his sense of humor is on a par with the rest of us. He thoroughly appreciates a good joke and thus shows that despite his sedateness, despite his preoccupation with the more serious and broader aspects of life, he nevertheless enjoys some outlets from forbidden sources. It was from observations gleaned during those meetings, where everybody is in the habit of giving free expression to his thoughts, where aided by the spirit of the occasion everybody is "off guard," that I have solved the meaning of our admiration for Hamilton. It is based on an unconscious *feeling of contrast*. It seems that we discern in him a quality which we would fain possess, but which for some reason we either could not or did not as yet attain. This conclusion, I feel, was confirmed by the data that I gathered for this sketch.

Hamilton descended from a hardy Scotch and English stock. He himself traces his lineage to one David Hamilton, a Scot, loyal to the Stuarts who fought against Cromwell, and having been captured was shipped to

<sup>1</sup> The membership of this club is limited to twenty.

Boston with a lot of "Iron Werke" and Scotch prisoners in November 1652 to be bound out as an indentured servant in Newburyport. He did not however remain long a servant. He soon managed to buy land on the shore of the Salmon River in New Hampshire, and then send for his sweetheart Hannah Jackson whom he married and with whom he reared seven sons. When he was quite old and sick he was killed fighting Indians. Your president's great-grandfather, Jonathan Hamilton, was the first physician in the family, and Samuel W. Hamilton adds, "My grandfather and two brothers were homeopaths, also my father and uncle and their cousin. My own cousin and his three sons are physicians."

The maternal side of the family was no less distinguished medically. Roger Tyrrell, free planter of Milford (Connecticut) landed in Boston from England in 1632 and Henry Turrill, our president's maternal grandfather, was a dentist. Dr. Hamilton's father, Warren Henry Hamilton, died at 27 of diphtheria, acquired from the bite of a two-year-old patient whom he was relieving of choking on his diphtheritic membrane. This martyr to his profession was survived by his wife, the former Mary Salome Turrill, and their first and only child of nine months. Samuel W. Hamilton was brought up by his mother in the home of his maternal grandparents, who supported herself and her child by teaching the piano.

I received these notes from our president who ended his letter with the remark: "The Association has no interest in these matters, but I have no doubt some of them confirm your analytic observation of me."

Well, speaking first as a pure descriptive psychiatrist, I was very interested in these notes. For although I have known Hamilton since our medical student days I did not know anything of his early life. The thoughts that flashed through my mind as I read about his lineage ran something like this: "I doubt whether we have ever obtained such a full history of heredity and environment from any former president of this Association." How many of our members can trace their genealogy to the sturdy Scotch-English stock that reached the New England shores at the very beginning of its civilized existence? And how many of our

presidents or members, judging by their heredity and environment, can settle the moot question of the transmissibility of acquired characteristics in the manner demonstrated by the life of Samuel W. Hamilton. On his paternal side, beginning with his great-grandfather, there were seven physicians, and as if not to be entirely outdone in the art of relieving suffering, his maternal side added a dentist. In addition, Hamilton's own cousin and his three sons are all physicians. No wonder that Hamilton chose medicine as his vocation. He must have inherited this familial tendency to help mankind.

I must also mention the fact that these physicians were not just ordinary doctors quietly practicing medicine. His great-grandfather was a Thompsonian medico, his grandfather and two great-uncles were homeopaths. One of them was so strongly intent on introducing this form of medicine into the United States that he moved into twenty-four different localities, from one to another, in order to introduce homeopathy. Our president must have inherited this steadfastness to fight for an idea at the hazard of all earthly comforts. For as I have watched Hamilton throughout his medical career I can say that his whole psychiatric mission has been directed to improve the status of the patient in the mental hospital. *Mutatis mutandis* Hamilton like his grand-uncle moved from place to place, from institution to institution in order to find ways and means of improving the lot of the state hospital patient. In his zeal to improve everything that might contribute to the patient's welfare, Sam Hamilton was undoubtedly influenced by his great-grandfather who once said: "I don't cure the patient, I make him more comfortable."

Samuel W. Hamilton was born in Brandon, Vermont. Following his graduation from the Rutland High School, he received his A.B. from the University of Vermont in 1898, and his M.D. from Columbia University (College of Physicians and Surgeons) in 1903. In 1946 his Alma Mater, the University of Vermont, conferred upon him the degree of Sc.D. (*honoris causa*).

Few psychiatrists of the present writer's generation have had as versatile a schooling in nervous and mental diseases as Samuel W.

Hamilton. This can be seen from the following list of his psychiatric activities:

- Assistant Physician, Manhattan State Hospital, 1905-1909
- Senior Assistant Physician, Utica State Hospital, 1910-1916
- Volunteer Assistant, Mental and Nervous Clinic, University of Breslau, 1911-1912
- Director, Police Psychopathic Laboratory, New York City, 1917
- Psychiatrist in U. S. Army, July 1917-September 1919
- Medical Director, Philadelphia Hospital for Mental Diseases, 1920-1922
- Assistant Medical Director, Bloomingdale Hospital, 1923-1936
- On Staff of The National Committee for Mental Hygiene, as Director of the Division on Hospital Service, 1917-1918, 1920, 1922 to date
- Director, Mental Hospital Survey Committee, September 1, 1936, to June 20, 1939
- Mental Hospital Advisor, U. S. Public Health Service since September 1, 1936

Dr. Hamilton not only gave faithful service to the positions he filled but he has also recorded his impressions and experiences in numerous papers and addresses. Perusing them—and I read thoroughly many of them—one is impressed by the fact that most of them deal with subjects on the practical aspects of the patient and his environment. Unlike most psychiatric writers who prefer to delve into the theoretical aspects of psychiatry, Dr. Hamilton apparently strove to eliminate the existing deficiencies of the present. His first paper (May 1907) was on treatment of excitement by prolonged baths, and his second paper was on friends of the insane (Philippe Pinel). These two papers were symbolic of Hamilton's position in psychiatry. His mission was to help the patient, and he unconsciously identified himself with the friends of the insane. This is fully confirmed by all his later works too numerous to mention here by title. There are papers on hospital management, on occupational therapy in which, I learned, Hamilton was interested before he went into psychiatry. There are a number of very valuable papers on planning of mental hospitals, on psychiatric service in general hospitals, on the activities of a good mental hospital, on training of attendants in mental hospitals, on the church and the mental hospital, the problem of military rejects and casualties, etc.

These titles were selected at random from a long list to show Dr. Hamilton's devotion

to the cause of the mental patient. All his papers can be read with profit by any person interested in the alleviation of suffering; his "History of American Mental Hospitals" in *One Hundred Years of American Psychiatry*<sup>2</sup> is a veritable treasure of information which no student of psychiatry should fail to read.

Before I knew anything about his early life I, a Jew, often looked at Sam and said to myself, "Here is a real modern Christian, conscientious, steadfast, philanthropic and unostentatious." I was surprised to hear that Dr. Samuel W. Hamilton was an *only child*, concerning which I have long ago said many things in a paper published in 1912. My main thesis was that the only child is as a rule maladjusted to life. I am very glad that I said also that there are exceptions if the child is properly reared. This was the case with Sam Hamilton. His mother, I was told by our president's wife, was a very magnetic and charming person who following the death of her husband devoted her whole existence to the nurture and education of her son. She evidently sensed that a boy needed the guidance of a father and she therefore enlisted the office of her pastor, Dr. Reese, a Baptist minister, who was a great influence in Hamilton's life. The school of psychoanalytic psychiatry I represent teaches that everything being equal, a man is guided in the selection of his wife by his mother-image. In choosing the charming Ruth Norton Hamilton as his life's mate Hamilton has continued under the same patient and benign care as he was under his own mother. There were two children: the daughter, Eva, died five years ago, and their son William is a forester.

This in brief gives, as it were, a profile of your president for 1946-47. It also explains, why Sam W. Hamilton chose the profession of medicine, why after he went into psychiatry because he was in debt and wanted to pay it, decided to remain there, for no other vocation offered a better *vis a tergo* for his particular personality, and why the State of New Jersey is to be congratulated on having acquired his services as Superintendent of the Essex County Hospital for the Insane.

<sup>2</sup> The American Psychiatric Association (Columbia University Press 1944).

## THE PLACE OF PSYCHIATRY IN THE VETERANS ADMINISTRATION MEDICAL PROGRAM<sup>1</sup>

MAJ. GEN. PAUL R. HAWLEY, M.D., WASHINGTON, D. C.

I should like to give you a general summary, a sort of aerial photograph of the neuropsychiatric problems facing the Veterans Administration, and to touch briefly upon some of the solutions we are evolving for them. Most of these matters have been discussed in more detail by other speakers so I shall devote but a word to each phase of the situation.

First, let me call your attention to the size of our job. Our armed strength during the first World War was roughly 4½ million, and from this group almost 70,000 neuropsychiatric disabilities resulted. We created what then appeared to be a mammoth hospitalization program for veteran care, and by 1945 had in all over 90 functioning hospitals, 32 of which were for neuropsychiatric patients. It is sobering to learn that some 50,000 neuropsychiatric beds were necessary to meet these needs.

During the war but recently over, 13 instead of 4 million men and women went into uniform. We are informed from the medical departments of the various armed services that well over 600,000 individuals have already been separated for neuropsychiatric disorders, or for defects of character or personality which prevented their retention in service. I am sure all of us here today, with the exception of the few visiting astronomers<sup>2</sup> who may be in our midst, feel a sense of unreality about figures of this magnitude. Perhaps it would be simpler to say that, great as the problem was following the first World War, it is at least three times greater today, three times tougher, and, I might add, three times more pressing in its immediacy. There are far different social and economic influences at play in our civilization today than in the twenties, a far different tempo in world events. We have got

to find solutions and we have got to find them now.

I said a moment ago that some 50,000 beds were found necessary to care for the neuropsychiatric invalids from the first World War and from previous conflicts. Does this mean that 20 years from today we are to have 400,000 neuropsychiatric beds, a hospital at every crossroads, a staff of Veterans Administration employees that could populate one of our larger cities, a budget appropriation that would resemble our national debt? It could, if we follow the pattern of the past. It could mean all of these things. The medical profession as a whole, and more particularly the psychiatrists and the neurologists of our country, have never before been so directly challenged. Here and today we are being put to the test. Is there such a thing as preventive medicine? Can a psychiatric illness be recognized soon enough, and treated effectively enough, to prevent the patient's withdrawal from society even for a short period? Can the course of existing psychiatric disorders be modified? Can the psychiatric invalid be restored to a level of social adjustment that makes community functioning possible?

Society is asking these questions. I am convinced that the psychiatrists of the United States can answer them. I am consciously and intentionally passing this question and this challenge along to you. The time has passed when such an agency as the Veterans Administration can be something apart, a thing unto itself. The time has passed for jealous guarding of the narrow prerogatives of any clique. My sons as well as yours are now "veterans." The sons of my neighbors as well as of yours are now "veterans." As fathers, and as men, we cannot "leave it to George" with flesh of our flesh and bone of our bone. We cannot as physicians ignore our duty.

The Veterans Administration cannot do this job. I say this in all frankness and in all candor. The Veterans Administration

<sup>1</sup> Maj. Gen. Hawley was a guest speaker at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., Mar. 27-30, 1946.

<sup>2</sup> Dr. Harlow Shapley was also a guest speaker at this meeting.

cannot do the job alone. It is a task that will tax the strength, the skill, and the patience of every qualified physician in the country. It is a job which requires—which demands—the combined effort of the entire medical profession, no whit less than did the tremendous medical programs of the armed forces during the war. It can be done only when we have each become “physician to the American veteran” just as we were “physician to the American soldier” only a few months ago.

I promised to mention briefly some of the solutions that are being evolved. They were developed with your help and under your direction. I see many physicians here today who have sat on our consultative and advisory boards in Washington. Implementation of the ideas evolved there was possible only with your help, and their effectiveness will, in a major way, be the reflection of your continued, unstinted efforts individually, and through such organizations as The American Psychiatric Association, toward our common goal. Outstanding men in the various specialties already are giving us the benefit of their wisdom and their experience on the spot from Maine to Texas, and from Washington to Florida. We are determined to expand this program until we have a group of medical consultants representing every major specialty working in direct conjunction with each of our 13 branch offices. We must have your help and the help of your association. Nor will this be sufficient. Each of our hospitals must rely upon the most skilled of the physicians in its immediate community for guidance and for direct professional advice. Again The American Psychiatric Association can be of invaluable help in assuring us highly qualified men for these posts.

Hospitals—we shall of course need more. Those now in existence are, almost without exception, overcrowded, and their facilities far below what you and I consider ideal. We have enough asylums scattered over the country, some under Federal operation, some under that of the States. We want, we need, and *we will have*, hospitals worthy of the name. You have suggested that general hospitals have active psychiatric services; that psychiatric hospitals have active medical and

surgical departments. You have suggested that these be located in proximity to medical schools, to centers of population, to the best medical skills in the community. This will be done. We have now in Washington a group of architects from New York City, from Chicago, from the West—the best we could find—who, as I talk, are designing these hospitals to meet the most up-to-date requirements of not one, but of every medical specialty. It is my conviction that our new hospitals will meet and excel the most advanced construction standards in the world.

The neuropsychiatric division of our general hospitals and our psychiatric hospitals will be structurally designed for treatment. Occupational therapy wings, with lathes, photographic laboratories, carpenter shops; shock therapy suites; extensive hydrotherapy departments; neurosis centers—all will shorten hospitalization and improve our results.

I am told and I believe that there are few illnesses which do not carry with them psychiatric implications. I am told that this is especially true in the chronic debilitating disorders and in those mutilating conditions which seem naturally the province of the surgeon and the orthopedist. A number of our psychiatric hospitals are being designated as tuberculosis centers. In an atmosphere peculiarly oriented to the personal needs of the individual, these patients will receive the benefit of every modern therapy administered either by psychiatrists skilled in the treatment of tuberculosis, or tuberculosis men skilled in psychiatry, wherever you choose to place the accent.

Our Medical Rehabilitation Division, working in intimate collaboration with psychiatry, will assist the disfigured patient, the amputee, the blind, to come to terms with his handicap, physically and emotionally.

Through the establishment of active psychiatric units in our general hospitals our cardiologists and our allergists will have the services of the psychiatrist immediately available. Our psychiatrists will have constant access to the particular skills of the internist and of the surgeon. Our patients will at last receive the care implicit in the name “general” hospital.

You have stressed the need for treatment of that large group of patients whose disorders do not warrant hospitalization, but who are still too disabled to take their rightful place in the social structure. You have talked in terms of outpatient therapy, of mental hygiene clinics, and of social service work in the community. Until very recently all psychiatric outpatient departments of the Veterans Administration served a dual purpose. Pension examinations were performed in an effort to determine the patient's percentage disability, and at the same time attempts were made by the same physician, and frequently during the same interview, to treat the patient's illness. We are rapidly correcting this manifestly undesirable situation through the establishment of clinics staffed by psychiatrists, social workers, and psychologists, whose function will be entirely that of therapy. It will be possible for the eligible patient to come to these clinics by referral from other departments of the Veterans Administration, from community agencies, from private physicians, or simply on the basis of his own desire for help. There will be no pension examinations performed here.

Where it is not feasible for the Veterans Administration to establish such a clinic, where special therapeutic techniques are available in the outpatient department of the community hospital, and more particularly in those dense areas of population, where no one clinic, regardless of its size, could hope to serve all the patients needing assistance, again we must rely on you in the community to provide this care for your veterans. Many such contract clinics are already operating; more will be needed.

There is, we believe, no substitute for the intimate therapeutic relationship of the private physician and his patient. The medical societies of many of our states are rapidly working out plans whereby qualified specialists in neurology and psychiatry may apply their skill to the problems of the veteran patient. In some states these plans are already in operation. We need them in all.

The finest plans are sterile without human beings to put them into operation. The finest hospital in the world, the finest outpatient department in the country will be an empty architectural achievement until it is

staffed. There have been too few doctors, too few nurses, too few social workers, too few psychologists, too few attendants, too few physical therapists, too few—I shall not continue to name every category of worker devoted to the care of the neurological or psychiatric invalid. There have been too few of all. There are too few today. None of us in the medical profession will settle for numbers alone; we must also have quality. Our need for competent well-trained men and women in every medical branch has not been met. Here again is a job that is the responsibility of the whole medical profession. You have made magnificent efforts in this direction already. We must continue them. Resident training programs are being set up through your various deans' committees and professors of psychiatry in a number of veterans hospitals. None of us will be satisfied until every hospital comes under such sponsorship. Our staff physicians need and want these stimulating contacts. Young physicians just completing their internships, and older men looking for intensive training in a specialty, need and want the best educational program that can be established. The patients need and deserve the finest medical care available in the country.

Our hospitals are affiliating with nursing schools, and cadet nurses already are being trained in several localities. Other programs of affiliation are being developed with schools of social work. We are expanding our courses for hospital attendants, and making it possible for physical therapists, educational advisors, occupational therapists, and medical workers of every category to perfect their techniques and advance their skills both in veterans hospitals and in community centers. All of these programs, from the establishment of residencies, to weekly meetings between a ward physician and his attendants, will be reflected in progressive improvement in patient care, in shortened hospitalization, and in more rapid integration of discharged patients into community life.

All of us have a task before us which is not small. We can ignore the health of 13 million men and women, the finest of our country's youth, at our peril and at the peril of the future of the world. There is today a



uniformity of purpose and a determination to meet our obligations to the veteran, that permeates every stratum of society. The standards of the American medical profession, the knowledge and the skill of the country's physicians, and the material resources at their command, are unequalled. As men,

as fathers, and as doctors, we must hold to this strong purpose. We must duplicate, and duplicate again, these professional skills. We must help our young men and our young women, back once more from war, to meet the future with all that we can give them—strong bodies and sound minds.

## SEDIMENTATION RATE AND WHITE BLOOD COUNT IN MENTAL PATIENTS WITH RHEUMATIC BRAIN DISEASE<sup>1</sup>

WALTER L. BRUETSCH, M. D., INDIANAPOLIS, IND.

The *Annals of Internal Medicine* (21: 494, 1944) in an editorial discussing "The Cerebral Vascular Lesions in Rheumatic Fever," as they occur in mental patients with rheumatic brain disease(1-7), requested more information particularly with regard to fever, sedimentation rate and white blood count.

As to fever it may be stated that there is usually no elevation of temperature in mental patients with rheumatic encephalopathy. However, if in such patients a four-hourly temperature chart is kept over many weeks, there will be periods during which the oral temperature may reach 100° F. Other conditions such as incidental upper respiratory infections or latent pulmonary tuberculosis, which may produce such low grade fever, were carefully excluded.

Concerning the sedimentation rate and the white blood count two questions will be answered with this study: (1) Are there an accelerated sedimentation rate and increased white count in patients with chronic rheumatic brain disease, and (2) Are the determination of the sedimentation rate and of the white blood count of diagnostic value in differentiating patients with rheumatic encephalopathy from patients afflicted with other types of mental illness?

### FREQUENCY OF AN INCREASED SEDIMENTATION RATE IN MENTAL PATIENTS WITH RHEUMATIC BRAIN DISEASE

The study consisted of 28 mental patients with rheumatic brain disease in whom the sedimentation rate was determined. All the patients had concomitant rheumatic heart disease. There were available from two to

five determinations of the velocity rate of the erythrocytes in every patient. The Cutler vein method was used for determining the sedimentation rate(8, 9).

Of the 28 cases, 85.7 percent had an increased sedimentation rate. Of these, 15 cases (or 53.6 percent) had a slightly increased velocity rate, ranging between 10 to 19; and 9 patients (or 32.1 percent) had a moderately increased sedimentation rate of 20 to 30.

### FREQUENCY OF AN ELEVATED WHITE BLOOD COUNT IN MENTAL PATIENTS WITH RHEUMATIC BRAIN DISEASE

In 40 patients with rheumatic encephalopathy, associated with rheumatic heart disease, from two to eleven examinations of the white blood count were carried out.

The question arose as to what should be regarded a normal white count. Ten thousand white cells were considered the upper limit of normal in this study, although most hematologists consider 8,000 to 9,000 as the upper limit of normalcy. Ernstene(18) regards all counts below 9,000 cells per cmm. as normal in patients with former acute rheumatic fever.

Of the 40 patients, diagnosed psychoses with rheumatic brain disease, 30 percent had at one time or other a white blood count over 10,000. Of these, 17.5 percent had a white count ranging between 10,000 and 12,000; and 12.5 percent had a white cell count between 12,000 and 15,000. There were no cases with a leukocytosis over 15,000.

The simultaneous measurements of the sedimentation rate and of the leukocyte count reiterated the already known fact that the sedimentation rate is a more sensitive criterion of activity of the infection in rheumatic fever than the leukocyte count. This is illustrated by the following example.

The female patient, at the age of 22, was informed that she had a heart murmur. When 35 years old she was in bed for five months with "rheumatism." This illness was interpreted as a recurrence of

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1945.

From the Research Department, Central State Hospital, Indianapolis, Ind., and from the Department of Psychiatry and Neurology, Indiana University School of Medicine.

rheumatic fever. Eighteen years later, then aged 53, she had a stroke, which left a residual monoplegia and hypalgesia of the left arm. At the same time mental symptoms made their appearance. She became destructive, tearing pictures from the wall, and threatened to kill her neighbors. On various occasions she left the house unclad.

When admitted to the Central State Hospital, there were days when she had an unexplained oral temperature of  $99\frac{1}{2}^{\circ}$  to  $100^{\circ}$  F. The pulse was slightly irregular, and the rate was 100 per minute. The blood pressure was 150 systolic and 90 diastolic. There were no joint pains. A systolic and diastolic murmur was heard over the aortic region. The roentgenogram showed cardiac enlargement, and the electrocardiogram revealed evidence of myocardial damage. The diagnoses were as follows: psychosis with rheumatic brain disease; subclinical rheumatic fever; rheumatic aortic stenosis and insufficiency.

From 1940 to 1946 simultaneous determinations of the sedimentation rate and of the leukocyte count were made at regular intervals. During this time the sedimentation rate oscillated between 13 and 20 (10 is normal), while the white blood count remained well within normal limits, ranging from 4,750 to 8,300. In the differential count, however, there was at all times a marked shift to the left, with band forms averaging from 6-14 percent (normal 4), juveniles from 2-8 percent (normal 0), and myelocytes from 2-9 percent (normal 0).

On a rare occasion the reverse observation may be made, namely, there is an increased white count and at the same time an almost normal sedimentation rate. Wilson(10) in an analysis of the case records of 34 consecutive admissions to the Children's Pavilion of the New York Hospital observed 7 subjects with clinical symptoms of rheumatic activity, having a normal sedimentation rate in the presence of an increased leukocyte count. The following case history exemplifies such an instance.

The female patient, with a history of Sydenham's chorea at the age of 8 and 14 years, developed, when 31 years old, psychotic manifestations of the dementia præcox type. There was rheumatic mitral stenosis, which was well compensated. The pulse rate was 85. At one time, when the patient was mentally much improved, there was a white blood count of 14,800 and a sedimentation rate of 11 (10 is normal). The temperature at this moment was  $97^{\circ}$  F.

#### THE DIFFERENTIAL DIAGNOSTIC VALUE OF THE WHITE BLOOD COUNT AND OF THE SEDIMENTATION RATE

The second question as to the value of the white blood count and of the sedimentation

rate in the differential diagnosis of patients with rheumatic brain disease from other mental cases is more difficult to answer, because an accelerated velocity rate and leukocytosis occur in a variety of psychotic patients. Bowman(11), who made a statistical study of the white cell count of patients on admission to the Boston Psychopathic Hospital, found the leukocyte count over 10,000 in 54 percent of the schizophrenic cases and in 53 percent of patients with manic-depressive psychosis. Diethelm and his associates(12) in a series of 200 patients, representing consecutive admissions with "various emotional states," to the Payne Whitney Clinic in New York found that approximately one-third of the patients had initial white blood counts of 10,000 cells or over. In 34 patients of this group, however, some infectious condition was present such as sinusitis, rhinitis, pyelitis, pelvic inflammatory disease, and pulmonary tuberculosis which influenced the leukocyte count. In Diethelm's study(12) rheumatic heart disease was not mentioned among the possible chronic infections. My own studies on the leukocyte count of various diagnostic groups of mental patients revealed a considerably lower percentage of white cell counts over 10,000. In newly admitted schizophrenic patients 20 percent, and in patients with manic-depressive psychosis 21 percent, had a white blood count over 10,000.

In another of my blood count studies of new admissions, comprising every type of psychosis, the white cell count was over 10,000 in 22 percent. This compares with 30 percent in mental patients with rheumatic brain disease. From a statistical comparison of these figures it is obvious that the determination of the leukocyte count is of little aid in ferreting out patients with rheumatic brain disease from other types of mental illness, among which they may be hiding. Neither is Schilling's differential count of much value because a shift of the neutrophilic blood picture to the left has been frequent in all types of major psychoses of my case material.

Strikingly, in the rheumatic mental patients there were no white cell counts over 15,000 cells, while in the schizophrenic and manic-depressive patients of Bowman(11)

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there were 11 and 12 percent respectively. In my own material 6.6 percent of schizophrenic patients had on admission a white cell count over 15,000. Some of the patients admitted to the Payne Whitney Clinic (12) had leukocyte counts as high as 18,000. The behavior associated with leukocytosis was given as panic reaction, depression with agitation, excitement with overactivity and elation. The white cell count in these cases returned to normal levels when the fear subsided. Diethelm and his co-workers (12) expressed the opinion that the leukocytosis could not be explained solely by the emotional factor, because there were cases with pronounced anxiety in which a persistent low white count was present. With this conclusion I concur.

The question then arises: Is the more sensitive sedimentation test of some diagnostic aid in this problem? Many sedimentation studies in mental patients have been carried out. Only a few will be mentioned here. Stephenson (13), who studied the sedimentation rates in various psychoses, found in patients with senile and arteriosclerotic psychoses the rates increased in 78 percent. In 150 schizophrenic patients with no apparent physical illness or infection 60 percent had elevated rates of sedimentation. Schottky (14) reported normal values in cases of schizophrenia even if they showed a tendency to progression. In catatonic excitement, however, the sedimentation rate was always accelerated. In manic-depressive patients Schottky (14) observed normal values. Freeman (15) studied 47 cases of schizophrenia and came to the conclusion that neither the catatonic nor the other types of schizophrenia showed the abnormal values so frequently ascribed to them. It is obvious, then, that at this stage of uncertainty as to the exact status of the velocity rate of the erythrocytes in mental diseases, the sedimentation rate is of no clear-cut value in this particular question.

#### HISTOLOGIC CORRELATION BETWEEN THE SEDIMENTATION RATE AND THE ACTIVITY OF THE RHEUMATIC PROCESS ON THE HEART VALVES AND IN THE CEREBRAL VESSELS

For this part of the study 4 cases with rheumatic brain disease were available. In

all four instances a most extensive histologic examination of the brain, heart, and remaining organs was possible. In the following, one of these cases will be described in detail. In the other 3 only summary findings will be reported.

**CASE I.—History.**—B. G. N., a female patient and former school teacher, at the age of 58, developed rather suddenly an abnormal behavior, which necessitated commitment to an institution. She was the mother of 3 children. Until the onset of the psychosis she had been considered a strong-willed but otherwise well adjusted person. Quite abruptly she became unreasonable and suspicious and threatened the life of members of her family. At other times she secluded herself in a room.

On admission to the Central State Hospital, a harsh, systolic blow was heard, which was loudest in the second right intercostal space (aortic area), but which was also present in the mitral and apical region. There was a systolic thrill at the base of the heart. The pulse was 90 per minute. Its volume was small. On exertion, pulsation of the jugular vessels became noticeable. The blood pressure was 90 systolic and 70 diastolic. The roentgenogram revealed cardiac enlargement, mostly confined to the left side of the heart. The electrocardiogram was within the limits of normal. (It is not uncommon to have a normal electrocardiogram in the presence of organic heart disease.) A diagnosis of aortic and mitral disease, very likely on a rheumatic basis, was made, although a positive history of a previous rheumatic infection could not be elicited. At no time was there any evidence of cardiac decompensation.

The pupillary reactions were within normal limits, and the patellar reflexes were present.

Mentally, the patient presented the picture of an early senile psychosis with a paranoid trend. After a few weeks the mental symptoms subsided, and she was sent home. Six weeks later she became again disturbed and was returned to the hospital in a state of overactivity and talkativeness. She believed she was unduly held in the hospital and expressed ideas of persecution in reference to her sons. The memory was good for present and past events.

After a period of seven months practically all the symptoms disappeared, and she returned to her family. For six years she led a fairly well adjusted life, when she again became talkative and renewed her paranoid activities. The acute behavior disturbance disappeared again, but this time she remained in the institution until she died two years later at the age of 73 of a pulmonary infarct.

In the last months of her life her memory was still fairly good. She was able to make a simple conversation very much like that of a person of her age and social standing.

The Wassermann reaction of the blood and spinal fluid was negative on three occasions. The cell count, total protein, and the colloidal gold curve of the spinal fluid were normal. In the urine were a slight trace of albumin and an occasional granular cast.

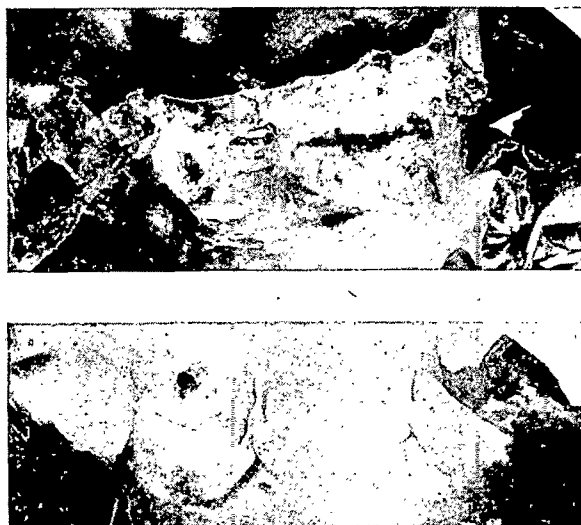


FIG. 1.—Rheumatic disease of aortic valve of many years' duration. On the aortic cusps are calcified coarse vegetations. Below is a normal aortic valve for comparison.

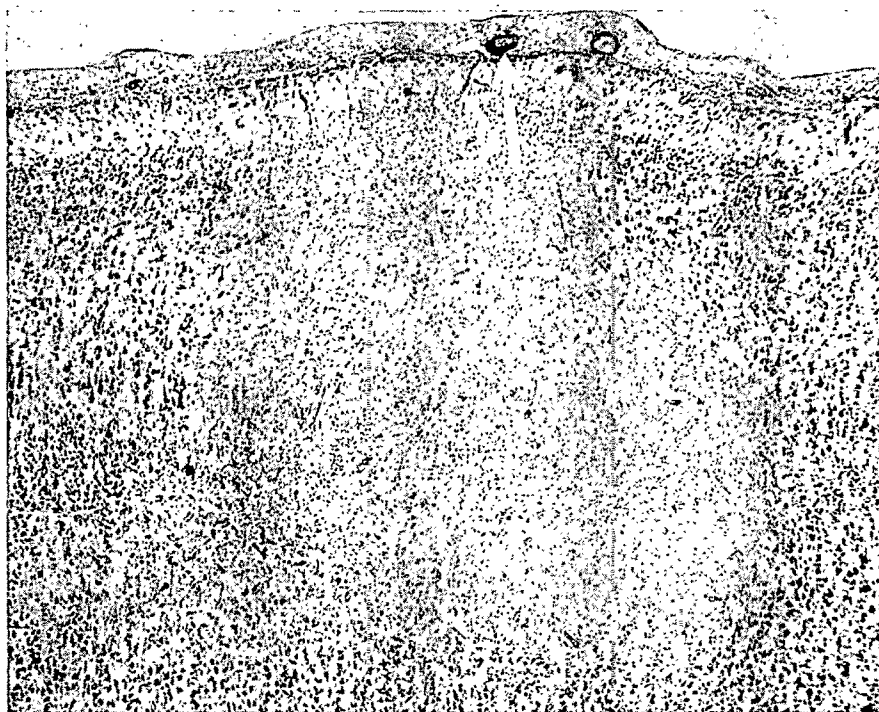


FIG. 2.—Rheumatic brain disease. Area of incomplete softening (acellular area) in cerebral cortex. One of the two small meningeal vessels, which on this section shows only beginning obliteration (arrow), is completely occluded in succeeding sections. Toluidin blue stain.

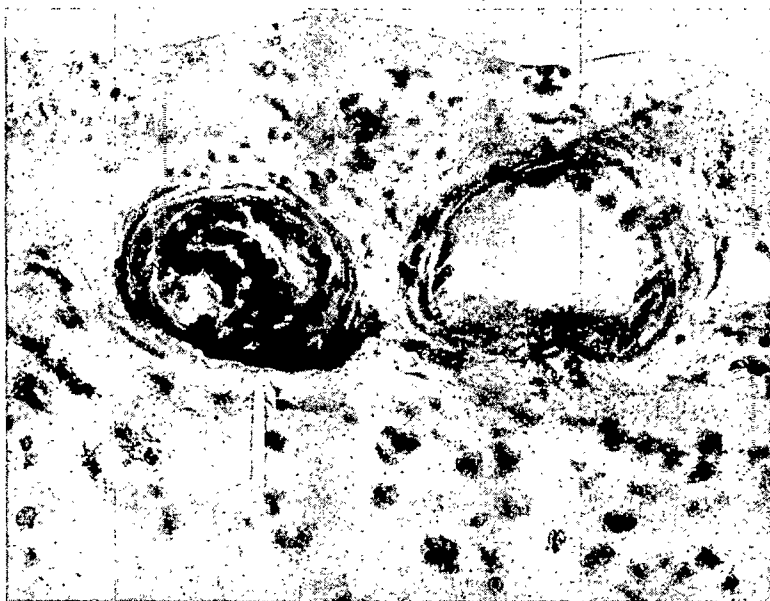


FIG. 3.—Two small meningeal arteries. The lumen of the vessel to the left is obliterated by proliferated intimal cells (rheumatic endarteritis of intermediate age).



FIG. 4.—Rheumatic verruca in the active stage of formation in small artery of submucous layer of gastric wall. In the base of the verruca is an accumulation of mononuclear cells and lymphocytes. Toluidin blue stain.

In the two years prior to her death the sedimentation rate was moderately accelerated, *i.e.*, the rate stayed between 24 and 27. The white blood count was never higher than 8,500 with 10 percent band forms and 4 percent myelocytes.

The diagnoses were: psychosis with rheumatic brain disease; subclinical rheumatic fever; rheumatic aortic stenosis and mitral insufficiency.

*Postmortem Observations.*—Autopsy confirmed the clinical diagnosis of chronic rheumatic disease of the aortic and mitral valves (aortic stenosis and mitral insufficiency). The mitral valve ring was calcified in its entire circumference. On the inner and outer surface of the three aortic cusps were numerous calcified nodules (Fig. 1). The aortic valve had lost entirely its elasticity. In the past the gross appearance of such an aortic valve in an elderly individual would have suggested an arteriosclerotic etiology. Due to a better understanding of the pathologic findings in rheumatism, such valves are now considered the result of rheumatic fever (16). In addition, there was pericarditis sicca. The heart was enlarged, weighing 460 gms.

Other gross findings were a recent hemorrhagic infarct in the left lower lobe of the lungs and passive congestion of the liver.

Under the microscope both the mitral and aortic valves divulged rheumatic activity. In particular, in the aortic cusps were foci consisting of large macrophage-like cells with basophilic cytoplasm having assumed the morphology of Aschoff cells. There were also large plasma cells, some with two nuclei, and lymphocytes. In one out of eight myocardial tissue blocks one small Aschoff body was observed. The Aschoff nodule consisted of about twenty mononuclear cells, one of these being in the stage of amitotic cell division, and of an equal number of lymphocytes. This nodule would possibly have escaped notice, if pieces of the heart muscle had not been fixed in alcohol and stained with toluidin blue. This technique is the same as the Nissl method, used for the staining of the brain. It intensifies the basophilic properties of the cytoplasm of the Aschoff cells, which then can be picked out with relative ease. In addition to the isolated Aschoff body, individual Aschoff cells were scattered here and there in the interstitium of the heart muscle. In eight myocardial tissue blocks twice vessels were observed with recent endarteritis, the proliferating intimal cells attracting attention on account of the reddish cytoplasm. Occasionally, the lumen of some of the vessels was compressed by an increased amount of old connective tissue about the vessels. This is considered by Klinge (17) a characteristic feature of a rheumatic heart muscle.

In the adventitia of the aorta one Aschoff body was found. The loose connective tissue of the entire adventitia appeared to be in a stage of activation, as evidenced by the light-red cytoplasm of the connective tissue cells. There were also several thick-walled rheumatic-endarteritic vessels in the adventitia.

The brain was grossly normal. There was little if any atrophy of the convolutions. The vessels at the base as well as the meningeal vessels were en-

tirely free of yellow atherosclerotic plaques. Microscopic examination revealed rheumatic brain disease. There were areas of incomplete softening (acellular areas) in a little more than half of the tissue blocks, which were removed from the upper aspect of the brain (Fig. 2). The acellular areas were much less frequent in cortical blocks from the lateral aspect and from the temporal and orbital lobes. In the latter regions only one acellular area was observed in about every tenth tissue block. There were small meningeal (Fig. 3) and cortical vessels with rheumatic endarteritis. On serial sections it was observed that the rheumatic-endarteritic occlusion of Fig. 3 extended over only a short distance. Then the vessel was entirely free of intimal proliferation. Some of the changes on the cerebral vessels were of intermediate age, but others were recent and active at the time of death. For instance, in one meningeal artery with an active endarteritic process, proliferating intimal cells were seen growing toward the center of the lumen, entangling white and red blood cells. Once a small connective tissue scar was noted in the middle cortical layers of the frontal lobes. As to the number of intravascular leukocytes one may say that, generally speaking, there were few white cells in the lumen of the cerebral vessels. The basal ganglia and other portions of the brain were free of changes.

In the muscular layer of several large arteries of the spleen a few small Aschoff bodies were present. There were no rheumatic-endarteritic vessels.

In the liver was passive congestion. The histiocytic lining cells of the capillaries revealed no evidence of stimulation, and immature white blood cells were not present in the lumen of the liver capillaries.

With the exception of an increased number of mature polymorphonuclear leukocytes nothing unusual was observed in the bone marrow.

In the submucous layer of the gastric wall a thin-walled artery with a delicate rheumatic verruca was present, consisting of actively proliferating intimal cells (Fig. 4). On one of these cells a mitotic figure was encountered. In the base of the verrucous formation there was an accumulation of mononuclear cells and lymphocytes. In cutting the vessel serially, the verruca was present in eight sections only, then disappeared completely, leaving an entirely normal intima.

*Comment.*—In this patient with no outward symptoms of rheumatic fever there were moderately increased sedimentation rates with normal white blood counts in the two years prior to death. The clinical diagnoses of rheumatic brain and heart disease and subclinical rheumatic fever were verified by histologic examination, bringing to light old and recent rheumatic changes in the brain and activity in the tissue of the heart valves. Aschoff bodies in the myocardium, in the adventitia of the aorta, and in the muscular layer of splenic vessels

were evidence of the presence of subclinical rheumatic fever. An intimal verruca in a vessel of an abdominal organ was observed in the active stage of formation, presenting further proof that the rheumatic infection in this individual was still or again active, although the initial infection must have taken place many years ago.

CASE 2.—O. T., male, aged 60. Psychosis with rheumatic brain disease and subclinical rheumatic fever, presenting the mental picture of a pre-senile psychosis. There was rheumatic aortic stenosis. Six months prior to death, when the patient was otherwise in good physical health, the sedimentation rate was 22, and the white blood count was 10,550 cells.

*Postmortem Observations.*—On the aortic cusps, which were studded with large roughened nodules and calcified vegetations, there was recent activity as shown by microscopic examination. In the tissue of the aortic valve were areas with large numbers of lymphocytes, plasma cells, macrophages laden with yellow pigment, and multinucleated Aschoff cells, some of the latter having assumed the characteristics of giant cells with 6 to 8 to 10 nuclei. Along the closing border was a narrow rim of fibrin into which young fibroblasts were growing. In the mitral valve were only slight quiescent rheumatic lesions consisting of obliterated blood vessels. In the myocardium an occasional Aschoff body with large basophilic cells in the stage of mitotic cell division pointed toward activity of the rheumatic process.

There was rheumatic encephalopathy with a moderate number of areas of incomplete softening (acellular areas) in the cortex. In the brain, recent activity of the rheumatic process was manifested by the presence of a small meningeal artery with a proliferating intimal cell in the stage of amitotic cell division.

In the spleen, several blood vessels were obliterated by old acellular connective tissue. In other splenic vessels were actively proliferating endothelial cells. In one instance the intimal proliferation took place adjacent to a small area of fibrin, which was lying against the vessel wall.

CASE 3.—T. G., female, aged 47. Psychosis with rheumatic brain disease and subclinical rheumatic fever, with the symptomatology of rheumatic epilepsy(3). The cardiac diagnosis was rheumatic mitral insufficiency. On the last re-admission, the sedimentation rate was 13 and the white blood count was 9,300. Three months before her death, in the absence of any physical illness, the sedimentation rate had accelerated to 22 and the white blood count had increased to 13,100.

*Postmortem Observations.*—There was chronic rheumatic valvulitis of the mitral valve with histologic signs of recent activity. Along the closing border were areas with young fibroblasts. A few polymorphonuclear leukocytes were intermingled with these cells. In these regions small amounts of

fibrin were noted. In other areas of the mitral valve, lymphocytes were scattered in a loose fashion throughout the valvular tissue. Deep in the tissue of the mitral valve a group of large basophilic mononuclear cells was observed, which was interpreted as an Aschoff body. In the heart muscle an occasional Aschoff nodule, some of these being in the stage of regression, were found in approximately one half of the tissue blocks. There were several myocardial vessels with old and one with fairly recent endarteritis.

There was chronic rheumatic brain disease with old endarteritic changes of the small cortical and meningeal vessels. The obliterated small vessels had produced numerous areas of incomplete softening (acellular areas) in the grey matter. There was no evidence of recent rheumatic vascular disease in the brain. In the lumen of the vessels of the brain and internal organs the number of white cells was about normal.

CASE 4.—T. O., male, aged 46 years at the onset of the psychosis. Death at age of 86. Psychosis with rheumatic brain disease and subclinical rheumatic fever. During forty years the patient had periodic psychotic attacks during which he was suspicious, threatening and depressed. At times he refused food for fear of being poisoned. In spite of this severe maladjustment he was able to live most of the time outside of an institution. Six months prior to death, while he was in good physical health, the sedimentation rate was 28 and the white blood count was 6,200.

*Postmortem Observations.*—On the mitral valve were old fibrosed vegetations and signs of mild recent activity with fibrin along the closing border which was in the stage of organization by young fibroblasts. In two out of thirteen myocardial blocks there were rudimentary Aschoff nodules, consisting of 8 to 10 and more Aschoff cells. In the pericardium was slight lymphocytic infiltration.

In the brain was rheumatic disease with acellular areas (incomplete infarctions) and rheumatic obliterating endarteritis of small meningeal vessels of many years' duration. There was no recent rheumatic activity in the cerebral vessels. In the kidneys a mitotic figure on a proliferating intimal cell of a small artery was observed.

## DISCUSSION

The correlation of increased sedimentation rates with histologic studies in 4 patients with rheumatic brain and heart disease disclosed rheumatic activity on the heart valves and sometimes in the vessels of the brain and of other organs in every one of these patients. The sedimentation rate in these individuals had shown a slightly or moderately increased acceleration of the erythrocytes. On the other hand, the white blood count which was studied simultaneously had, with one exception, remained below



10,000 white cells. From the results of this study one can conclude that the sedimentation rate in mental patients with rheumatic brain disease is a sensitive index of activity of the rheumatic infection. Rheumatic fever cannot be considered extinguished until the sedimentation index has returned to and remained normal. However, one should always keep in mind that occasionally rheumatic fever may be active in the presence of a normal sedimentation rate(10).

Of the three indices of activity: fever, leukocytosis, and sedimentation rate, fever is possibly the least reliable guide as patients with active infection may have normal temperature. The same may be said of the leukocyte count(18, 19). Ernstene(18) observed during the acute phase of rheumatic fever the leukocyte count to return to a level below 9,000 within a few days to two weeks after the subsidence of fever and polyarthritis. At that time the infection is obviously still present, yet the leukocyte count has already ceased to be an index of activity. It should be pointed out here that even during the active polyarthritic phase of rheumatic fever the leukocytosis is usually not very high, ranging as an average from 13,000 to 17,000. The sedimentation test, on the other hand, is of definite value in detecting the presence of active rheumatic fever, which otherwise might escape notice, in individuals who show no outward signs of rheumatic fever, but who are suffering from what is termed subclinical rheumatic fever. The possible existence of subclinical rheumatic fever may be suspected in every individual in the presence of rheumatic heart disease.

The sedimentation rate determination is a test of nonspecific character and its aid is of minor significance in differentiating patients with rheumatic encephalopathy from other mental patients, because increased sedimentation rates have been observed in the various diagnostic groups(13, 14), under which a patient with rheumatic encephalopathy may masquerade.

The psychotic manifestations of a patient with rheumatic brain disease may resemble any psychosis. If the involvement of the brain occurs in a younger individual, a mental picture suggesting dementia præcox may

result(4). If subclinical rheumatic fever involves the brain in more advanced life, psychiatric syndromes such as involuntional or senile psychoses may be imitated. Severe depressions have been observed as the result of rheumatic brain disease. Behavior disorders in children following rheumatic chorea are not an uncommon sequel and point to the persistence of the rheumatic infection.

#### SUMMARY AND CONCLUSIONS

1. In mental patients with rheumatic brain disease the sedimentation rate was slightly or moderately increased in 85.7 per cent. The white blood count was over 10,000 cells in 30 percent of such cases, emphasizing that the sedimentation rate is a more sensitive index of activity of the infection in subclinical rheumatic fever than the leukocyte count.

2. In 4 patients with rheumatic encephalopathy, who had increased sedimentation rates, a correlative histologic study disclosed rheumatic activity on the heart valves and in the vascular system of the brain, kidneys, spleen, etc.

3. Greater familiarity with the existence of subclinical rheumatic fever in apparently physically healthy mental patients, in the presence of rheumatic heart disease, will bring nearer the time, when this group of patients, in whom rheumatic fever has affected both the heart and the brain, will be accurately recognized.

4. The sedimentation rate is of little value in contributing to the differentiation of patients with rheumatic encephalopathy from other mental cases.

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## THE THERAPEUTIC USE OF PROLONGED SODIUM AMYTAL NARCOSIS<sup>1</sup>

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The first use of prolonged sleep induced by soporific concoctions lies somewhere in antiquity. In more modern times, the use of ether by Long (1842) and Morton (1846) gave narcosis-producing drugs a utility hitherto unrecognized. Under the impetus of the speculative interest thus aroused, this type of drug found early application in the treatment of the psychoses. Griesinger(1) in 1861 remarked:

High expectations were formed of ether and chloroform when anesthesia was first discovered; and certainly complete and rapid recovery has occurred in several cases of recent active melancholia. But numerous observations have shown that frequently (although not invariably) a temporary remission of the melancholia and mania, sometimes a complete lucid interval, follows the awakening from the narcotic effects of chloroform; soon afterward, however, the morbid symptoms returned, and with each inhalation the remissions gradually shorten until they can no longer be obtained.

By 1900 more than 40 sleep-producing drugs had been used to produce prolonged narcosis. Neil Macleod(2) at that time used sodium bromide in his "bromide sleep" which he characterized as "A New Departure in the Treatment of Acute Mania." It is judged that Macleod in meeting the necessity of caring for his patients in their homes in Shanghai, China, really induced a therapeutic bromide intoxication somewhat akin to the drug intoxication here under review. He does not speak of his patients experiencing a delirium. Some of their recorded reactions, however, are very suggestive of such behavior. Ragg(3) is disinclined to credit Macleod with the innovation of: "A New Departure in the Treatment of Acute Mania," and refers to Clouston as having used "bromide" in a similar manner. On personal review of the administrations of bromide by Clouston we do not believe them comparable to the method out-

lined by Macleod. Clouston's experience is summed up in the following statement: "I have used the bromides alone in acute mania extensively and experimentally. In small doses it seems to have no effect. In very large and continuous doses, say a drachm every three hours continued for many days, it will cause bromism, and quiet the patient, but when its influence is over he becomes as bad as ever. I have never seen any medicine where the maniacal excitement and the physiological brain-torpor of the drug seemed so visibly to fight for the mastery." A little later came trional(4), veronal(4), somnifen(5), chloral(6), dial(7), pantopon, adalin, sodium luminal, avertin, and many others. Loevenhart(8), Lorenz(9), and Bleckwenn(10) made noteworthy contributions. In 1925 Wright(11) apparently without knowledge of the work of Macleod, but stimulated by the suggestions of Ulrich(12), reported his "Results Obtained by the Intensive Use of Bromides in Functional Psychoses." His "... plan of bromide intoxication," although less heroic than that of Macleod yielded encouraging results. Lindemann(13) in 1931, in evaluating the studies of Lorenz and Bleckwenn found that small doses of sodium amytal given intravenously produced "... a mild euphoria and a release in inhibitions and reserves in both psychotic patients and normal individuals." In 1932 Palmer and Paine(14) reported their use of sodium amytal in prolonged narcosis in the psychoses. In 1937 Palmer and Brace-land reported: "Six Years Experience with Narcosis Therapy in Psychiatry." Sodium amytal was the drug again favored by them. Narcoanalysis was brought into use by Horsley(16) in 1936, by which term he sought to imply a combination of narcosis and psychotherapy. In 1941, Gottlieb and Hope(17) used sodium amytal intravenously to evaluate prognosis in schizophrenia. In the settings of war, Grinker and Spiegel(18) in 1944 introduced the term, narcosynthesis; which procedure is now frequently supplemented by hypnotism(19).

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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The purpose of this study, which has been carried on since February of 1938, has been the finding of an efficient less time consuming method of therapy for the borderline personality disorders. Knowing that in the excitement stage of etherization, of alcoholic intoxication, and in the verbalizations of the various deliria, there is a dramatic loosening of inhibitions and often an unveiling of painful repressions, it was judged profitable therapeutically to formulate a method by which such exposition might be made to the advantage of the patient. However helpful the partial and full narcosis phases of the therapy are, it is specifically the production of a constructively expressive delirium which is the main object of the procedure. Awareness that the creation of an artificial state of delirium is not without some risk is freely admitted. Nevertheless, emboldened by the literally shocking, and to some extent destructive techniques of insulin comas, metrazol convulsions, electroshock, and prefrontal leucotomy to obtain constructive end-results, the deliberate use of a delirifacient drug was undertaken. Of the several drugs available sodium amytal was chosen.

#### THE PATIENT

In this study, only patients falling in the general classification of borderline conditions have been selected. The following conditions have been considered appropriate for selection: Various neurotic manifestations, exaggerations, fixations, and eccentricities; psychoneuroses; neuroses of war; reactive mental depressions; certain involutional and senility reactions; incipient manic-depressive reactions; and early schizophrenic behavior. These groupings include most of the selections made, yet not all in these groups are chosen, nor are they judged to be eligible. Occasionally the method has been applied to psychotic patients, but in such cases it is usually supplemented or followed by electroshock or insulin therapy.

The selected patients may be of either sex and of any age. The youngest patient treated was 14 years, the eldest 74. Contraindications are serious cardiac disease, pulmonary disease, impaired renal or liver function, and blood dyscrasias.

Prior to therapy, the patient must consent and next of kin must give written permission for the procedure. Before treatment also, the somatic status of the patient is thoroughly evaluated—blood Wassermann, complete blood count, urinalysis, nonprotein nitrogen, blood sugar, and stool analysis are routine. Basal metabolism determination, glucose tolerance and phosphorus determinations, electrocardiography, and electroencephalography are done only on indication for differentiation or reassurance purposes. Just prior to treatment, the eliminative functions of the patient, state of hydration, and temperature are thoroughly checked.

#### THE METHOD

A patient carefully selected, both somatically and psychically, is the subject. Sodium amytal is available in  $3\frac{3}{4}$  grain,  $7\frac{1}{2}$  grain, and  $15\frac{1}{2}$  grain ampoules. A  $2\frac{1}{2}\%$  solution in distilled water is administered intravenously at the rate of 1 to 2 cc. per minute. The initial dose is either a  $3\frac{3}{4}$  grain or a  $7\frac{1}{2}$  grain dose, and is usually administered on the evening before the full course of treatment is to be instituted. Only next of kin are permitted to visit the patient, and these visitors may see the patient only when he is thoroughly narcotized, or during a 12 to 24 hour interval immediately following cessation of drug administration. The drug is usually given intravenously, but may be supplemented by 3, 6, or 9 grain doses by mouth in the course of the treatment, especially if intravenous medication should be difficult. Occasionally the drug is administered intramuscularly and rectally. The patient is usually kept asleep from 12 to 20 hours out of the 24. During the time that he is awake, frequently he is somnolent and lethargic, but the aim is to have him periodically sufficiently awake to take liquid nourishment and to attend to eliminative functions. The usual period of narcosis is from 5 to 12 days, occasionally a few days longer.

Ingestion of solid foods is judged unwise during the period of narcosis. Fluid intake is highly important and throughout the days of narcosis is always kept between 3,000 and 3,500 cc. in 24 hours.

The goal of therapy is a toxic drug delirium in which the patient will not only talk freely, but also will act out and actually abreact some of the painful repressions which have been previously inaccessible. Immediately it is found advisable to discontinue the drug, fluids may be reduced to 2,000 cc. or 1,500 cc. per day in order to stimulate the onset of delirium. Occasionally such delirium is initiated by a convulsion. None of our patients has experienced more than 4 such convulsions during treatment. General tremulousness, photophobia, a staggering gait, and thick hesitating speech are frequently present. After the delirium is in full swing, fluids are usually increased to the original 3,000 to 3,500 cc. per day.

Toxicity is not always easy to recognize. Prior to the toxic stage, the patient has been carried along on doses of sodium amytal, varying generally from  $7\frac{1}{2}$  to  $15\frac{1}{2}$  as a rule, but occasionally as high as 20 or 22 grains per dose. The effects of the first doses of amytal are very carefully evaluated, especially regarding the blood pressure. It is usually during these earlier doses of sodium amytal that a serious fall in blood pressure occurs. After several doses the blood pressure seems to stabilize as the patient becomes somewhat tolerant of the drug. Any one intravenous dose after the patient has had his first dose of adjustment is usually carried to the point where the corneal reflexes disappear, and occasionally from  $\frac{1}{2}$  to 1 grain is added beyond that point. On the earlier administrations of the drug, the patient will sleep as a rule from 4 to 10 hours, occasionally longer. Later, the number of hours of narcosis obtained after an individual dose gradually becomes less. This fact has been looked upon as a reasonably reliable indication of growing toxicity. The patient who first sleeps some 4 to 10 hours on an individual  $15\frac{1}{2}$  grain dose will sleep no longer than 3 to 4 hours, and if the patient has been under more or less continuous narcosis from 4 to 8 days, then very careful attention is paid to spacing three  $15\frac{1}{2}$  grain doses so that they can be studied very carefully as to the actual length of time the patient sleeps after each dose. If the period of sleep after each of three such successive doses is consistently less than 3 hours, it can be reasonably con-

cluded that the patient has reached a stage of toxicity which will result in a therapeutic delirium within 2 or 3 days after the abrupt cessation of further administration of the drug.

The supervising psychiatrist should have frequent contact with the patient, and should constantly be on the lookout for signs of toxicity. Impairment of motor function seen in faulty co-ordination, staggering and insecurity of position generally, thick halting speech, occasional photophobia, and complaint of blurring of vision are usually suggestive of some degree of toxicity. The psychic manifestations of toxicity defy adequate description. Often the stream of talk and the content of thought, as directly observed by the psychiatrist, or as recorded in the nurses' notes, are very helpful, and the presence of a tendency to relevancy in the patient's remarks for several moments to be followed by irrelevancy are psychic indications suggestive of toxic modification.

Should the patient become incontinent of urine, or experience retention necessitating catheterization, toxicity must be considered. Occasionally, however, a patient will experience these impairments during the second or third day of the narcosis, and even in the absence of otherwise excessive reaction to the drug. All in all, with very watchful observation, toxicity and the appropriate time for the discontinuance of the drug can be determined in trustworthy manner. If, as previously stated, it is judged that the optimum time was not reached, then a reduction of fluids frequently still will bring about the therapeutic delirium desired.

With our changing professional personnel, we nevertheless obtained about 50% therapeutic deliria in our patients. Were it possible in a general hospital to have the same professional team carry through the full therapy in each case, it is believed that a percentage of 75 could be reached. If in the sodium amytal narcosis therapy, a therapeutic delirium is not obtained, there is, nevertheless much benefit derived by the patient. This is seen in his spontaneous readjustments to hospital environment and also in the discussion of his problem. He is much more accessible to analytic questions, and repressed material is more readily obtained.



The complete dissolution of the patient's conscious resistance during the narcotic hours seems to be highly beneficial. Nearly always he welcomes further inquiry and discussion, and his attitudes are more readily re-shaped. Psychiatric determinants previously unobtainable frequently come to the fore, especially if the psychiatrist will appropriately utilize the patient's utterances to well placed questions during his semi-conscious periods.

Reference also should be made to the fact that during the earlier doses of sodium amytal the administration may be so planned that analytic interrogation can be carried out as successfully as under sodium pentothal. The narcosis stage, however, is different from this earlier amytalization.

#### THE DELIRIUM

If correct estimations have been made and if administrations of the drug are abruptly stopped some time between the sixth and the twelfth day, the therapeutic delirium is usually experienced from 48 hours to 3 days after cessation of the drug. Occasionally delirium will set in 4, 5, or 6 days after the drug has been stopped, and rarely as long as 7 or 8 days. The delirium lasts as a rule from 3 to 6 days, occasionally only 2 days; again, it may last as long as 10 days, rarely longer than 2 weeks. It is judged that when the reactions ascribed to the delirium extend beyond 2 weeks, it is more a matter of slow remobilization of the patient's personality reactions than a protracted drug toxicity. Opportunity for psychotherapy, analytic and synthetic, has its place during the delirium and reassembling of personal behavior and attitudes, as well as during the period of amytalization and the period after the patient has fully recovered from the administrations outlined. It is judged that the psychiatric results obtained are always constructive and helpful, although not always as spectacularly evident in some cases as in others. There is amnesia for experiences while narcotized, but only partially, and sometimes not at all, for behavior in delirium.

The data obtainable during the therapeutic delirium vary with each patient, being often very colorful, and many times bringing out material of which the patient was previously

quite unaware. Much of the conduct of the patient in the delirium is a frank acting out, or abreaction, of repressed desires and earlier experiences. This can be made clear best by a brief case review.

*P. A.*—This maiden lady of 46 first made contact with the hospital 10 years ago. At that time her principal complaint was gastro-intestinal, and review by the gastro-enterologist disclosed malnutrition, hypothyroidism, secondary anemia, chronic irritable colon, and a very definite "functional nervous disturbance." The physical findings were essentially negative, except for the signs and symptoms common to the conditions named. The patient did not return to the hospital for further attention until April 1944, complaining then of pruritus perinei and eczematous lesions in the axillae. Following review by several physicians and clinics, the referring physician in Minneapolis diagnosed neurodermatitis complicated by a deeply ingrained psychoneurosis.

The parents had separated during the early childhood of the patient. This necessitated care in an orphanage for a year or two. She was then reared by her maternal grandparents with whom she lived to the age of 27. Both her childhood and her early womanhood were decidedly unhappy. Her mother was always hostile toward her, and needed her only when in trouble. The mother remarried, but this did not improve matters. The patient was much closer to her father who never remarried. Frequently she took trips with him. She felt highly secure in her relationships with him. She had one married sister and her parents were both living at the time her therapy was undertaken. She came under our care in May, 1944, and after preliminary studies, sodium amytal narcosis therapy was selected as the treatment of choice. It was carried through between July 2 and 10 of that year.

She was admitted to the hospital on May 29, 1944, and during the 34 days preceding narcosis, a well qualified psychiatrist questioned her on 7 different occasions during the intravenous administration of 7½ grains of sodium amytal. Although a few significant orienting phrases were obtained, no important repressions were elicited.

During the 7 days of prolonged narcosis, the attending nurses recorded many of the spontaneous remarks of the patient during her semi-conscious periods. On the fifth day: "I don't like women they're so caty—the men, I like them, (pause) I like to talk to them." Later,—is crying because she feels she should have been promoted to the head of her department . . . she does a lot of talking and worrying about her family. During the morning of the sixth day: "Have our boys reached Paris yet? . . ." Crying because people used to tell her that her buck teeth made her so she wasn't pretty . . . wants to know if her daddy went home. At 5:00 p.m. on rousing: "This is a different room . . . Is there a new baby out there?—My mother didn't want me. . . . Why can't daddy come to see me—He never bothers me—Mother does sometimes, but daddy doesn't—I can't blame mother for her condition—that's how she became when she

lost her baby. . . . I didn't marry 'cause nobody wanted me." About four o'clock in the morning of the seventh day of her narcosis, she remarked: "I thought I could see such horrible things before my eyes—then I see beautiful things—colors—I don't know whether I should enjoy them. You told me that's imagination. O, what a horrible long night I'm having. I don't think this is worth it." The drug was discontinued at 12:30 p.m. on this day—7/10/44.

During the interval from the discontinuance of the drug to the beginning of the toxic delirium (12:30 p.m. 7/10 to 3:00 p.m. 7/13), the patient's conduct was not especially unusual. Some of her reactions and remarks, however, are worthy of record. At 9:00 p.m. July 11 after a visit from her physician, she righted the pictures on the walls of her room. She had turned them face to the wall on June 27 while "peevied" at one of her attending nurses. During the afternoon of July 12 she shampooed her hair—"because it smells." Nurses recorded: The patient is in very good spirits. At 7 o'clock that evening the patient remarked: "I feel so good today," and an hour later it is again recorded: "I feel so good. It has been so long since I felt good." At 10 o'clock the nurse notes that the patient did not remember having been visited by her attending physician that day, although he did see her at 10:30 that morning. In her note of 3:00 a.m. 7/13, the nurse writes: She thinks that the glands in her body are now increasing in size, and that they are now 10 years younger—which means she still could have a big family. During this interval (7/10 to 7/13), the nurses repeatedly record that the patient is tremulous, "shaky," and complains frequently of hyperacusis,—"all noises seem magnified and amplified."

Shortly after visited by her attending physician at 2:30 p.m. (7/13), at which time the patient seemed to be moderately well in contact with her environment, she hastily came out of her room, went to the nurse, and decided she had better give away her jewelry, and wanted: "A priest to come at once and give me the last rites. I won't be here long. When it gets dark that is the time. The doctor gave it away that I'm going out. See my eyes and my arms, I'm so dehydrated." Slept 3 hours 7.00 to 10.00 p.m., but later that night was very busy, was talkative and restless. The next morning at 11 o'clock she was dressed, including coat and hat, and was attending "Billy's birthday" (a nephew). At 12:30 p.m. she was very much occupied with "two tons of moth balls." The nurse persuaded her to rest on her bed. At 2:30, however, when seen by her physician, the scene had changed again. As he came to the open door of her room, he found her standing by the window looking anxiously over the hospital grounds to a busy thoroughfare. She stood immaculate and still, hair in faultless coiffure, equally faultless cosmetic touches to face and hands, dressed in a gown of cerulean blue with dainty slippers of the same color. The physician approached and addressed her in a low voice: (Waiting?) Radiantly she quickly turned, and announced: "Yes, today is my wedding day. See?" Then she proceeded to show her physi-

cian about the room calling attention to certain feminine touches she had made. (And who is the lucky man?) "George—he should be here now." After reviewing her expectations and learning the identity of George, the physician withdrew. On inquiry as to status of the patient that night, the nurse reported: She's lying quietly in bed now, says she is dying.

At 7 o'clock the next morning (7/15) the nurse recorded: Voided in bed. At 10.00 a.m.: The patient remarked: "They should get \$3,000 from their grandmother." At 1.30 p.m.: The patient tore up her bedclothes to make a proper costume because she is an opera singer and must dress accordingly. At 2.45 p.m.: Is talking in a natural tone of voice about wearing navy blue to a press conference. Later, she is selling babies to imaginary people in the balcony. At 3.00 p.m.: Talked about Americans eating babies for dinner.

When seen at 7.00 p.m. by her physician, she was lying quietly in bed, and on seeing him, moved cautiously and maternally. Remarkd with a gentle touch about herself here and there: "These babies." (Babies?) "Yes, I have dozens of them." Then, with devotion in her eyes, she gave endearing pats to this one and to that one. In this obvious ecstasy of contentment, the physician took his leave. At one o'clock in the morning of the following day (7/16), the attending nurse records: Patient in bath room washing her breasts, and saying: "My, these babies are messy." At 8.30 that morning, the nurse writes: Says, "I've been dead for 10 days. God is love, but, if I am dead, why don't I die? I cannot die. There is so much work to do, babies to take care of—lovely babies . . ." At 10 o'clock of the next day (7/17), the patient was found crying. Remarkd: "All my nighties are dirty . . . and no one comes to see me and to take them home." Except for reference to the continued maternal reactions of the patient, the nurse makes no further significant record until 12.30 p.m. of July 18: Involuntary stool and urine in bed (probably in parturient effort or in final disgust). Eight o'clock of the morning of July 19 found the patient very cooperative and helpful to her attending nurses. At 3.00 p.m., the attending physician left an order that the patient might walk about at will on the open air porch of her hospital floor. At 7 o'clock the next morning (7/20), the patient announced: "I've slept so well." Two hours later found her reading the newspaper and 2 hours later still she was sewing and knitting. At 5.00 p.m. the nurse recorded: A good day. Seems in very good spirits. Eight o'clock the following morning (7/21) found her planning her convalescent vacation with a sister and nephews. At 11 o'clock during the forenoon nurse writes: Patient is very happy to have heard from George, and that he has been promoted in his firm. At 9.00 p.m. the nurse notes: The patient says: "I've just begun to realize that there's nothing to live for—no one to care about me." Says that she has been through the stage of imagining that people like and care for her. The next 2 days were not unusual. The patient continued to plan for her convalescent vacation. July 24 found her behavior well within average limitations, appeared thoroughly ef-

fective in her personality expressions, and during the afternoon expressed happiness over a long distance call from George. It was judged that patient had reintegrated her personality reactions effectively and well.

Convalescently, the patient spend a helpful vacation with her sister and nephews in St. Paul. She returned to her former position in October of 1944. She made 3 out-patient visits in 1944 and 3 in 1945. On each occasion, it is recorded that the

suspect that George continues to hold a place in her matrimonial aspirations, despite a proposal long overdue.

Application of the medicinal fraction of the therapy and the somatic reactions of the patient may be read, in part at least, from the following charts:

First, in the treatment chart, may be noted the administrations of the drug throughout July 3 to 9, inclusive. All the doses were given intravenously and the time of day is plotted. In the lower part of the chart the total in grains for 24 hours is recorded in graph form.

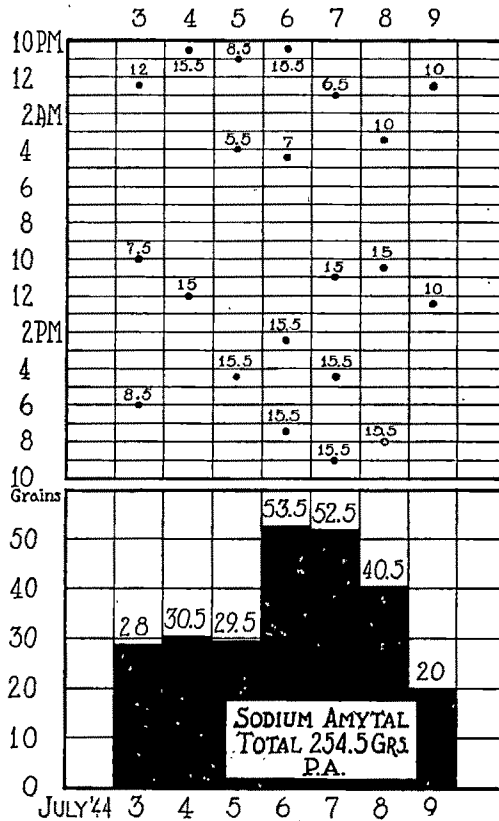


CHART 1.—Treatment chart.

Patient had received a number of intravenous doses of sodium amyral during the days preceding her intensive therapy, hence the usual test dose on the evening before initiating the treatment was considered unnecessary.

patient was holding her gains and carrying on adequately.

On a recent visit at our request, it was judged that her present personality behavior is thoroughly within the average. She admits of no complaints except an occasional headache, and on direct questioning will admit occasional irritation of perineum. "But, really Doctor, I think I'm doing quite well, and I hope you think so when you remember that my father died last December and my only sister died two weeks before that—I did have to take two weeks off at the time of my father's death." The patient is still a maiden lady, and we strongly

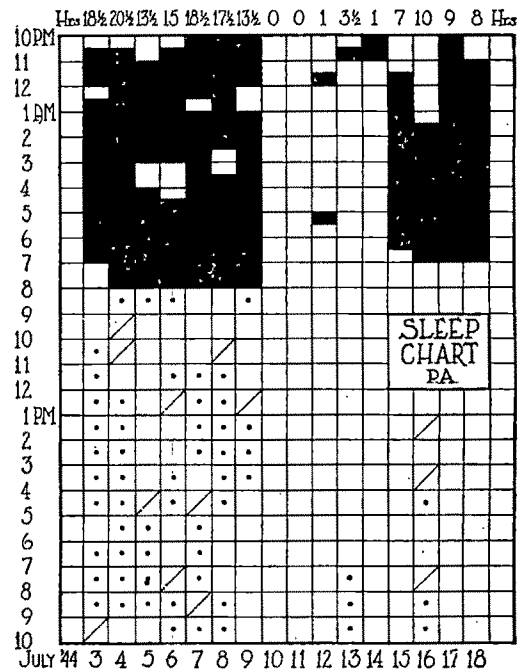


CHART 2.—Sleep chart.

The 24 hours represented on sleep chart are arranged as follows: The first hour of sleep begins at 10.00 p. m. Accordingly, "night" for the patient extends from 10.00 p. m. of one day to 8.00 a. m. of the following day. "Day" from 8.00 a. m. to 10.00 p. m.

Secondly, observe in the sleep chart that each hour of the 24 is accounted for, and that the "night" hours are plotted in solid black, one square to the hour. Sleep during the "day" hours is charted a dot to a square for one full hour and diagonal line across the square for a half hour. Note also that the patient did not sleep at all on July 10 and 11 and only one hour, 3½ hours, and one hour on July 12, 13, and 14.

Thirdly, the composite chart shows temperature and pulse; weight, 106 pounds on July 2 and 104 on July 18; and food intake as judged on portion of trays cleared. One square represents one quarter of food served per day. For 4 days, July 5 to 8, inclusive, only fluids were allowed, and are recorded in cubic centimeters.



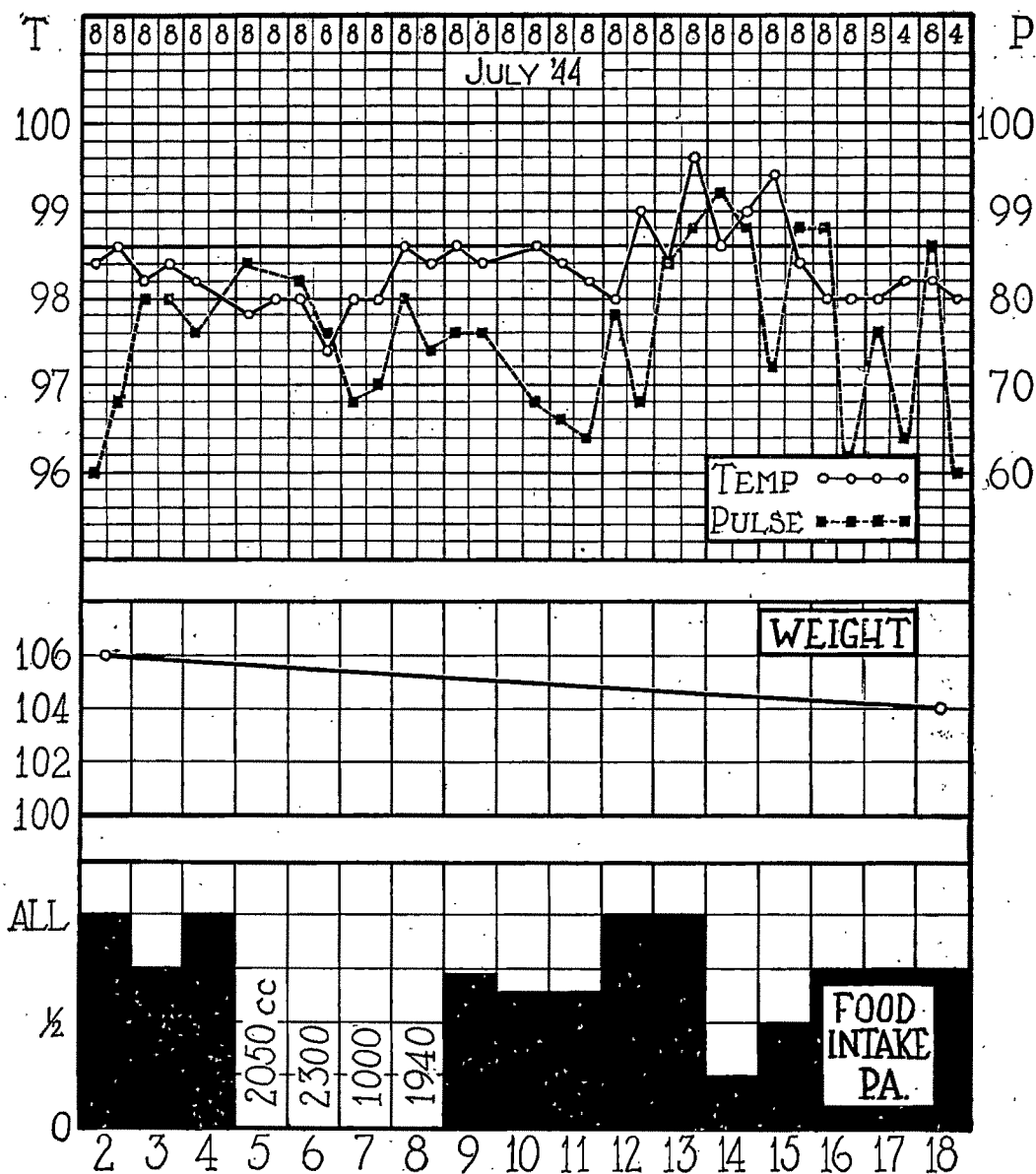


CHART 3.—Composite chart.

## THE FAILURES

Failure to obtain the desired therapeutic delirium and most of the undesirable reactions on the part of the patient which now and then are encountered are judged to be due more to mismanagement of the treatment setting of the patient and the faulty applications of the method than to imperfections of the technique itself. Patients not experiencing a therapeutic delirium are schooled to be satisfied with the results ob-

tained for the time being. Occasionally there is opportunity for a second period of narcosis therapy at a later carefully selected time. Rarely has recourse been taken to a third course of treatment.

Some of the difficulties encountered in this method include: Too rapid administration of the sodium amytal with a precipitate drop in blood pressure, occasionally an arrest of respiration to the point where artificial respiration is necessary. Stimulants of choice

have been adrenalin, sodium caffein benzoate, and coramine. Impaired respiration due to mandibular relaxation and "swallowing of tongue" has occurred only rarely. Aspiration bronchitis, pneumonitis, or pneumonia following nausea and vomiting during treatment has occurred a number of times without fatal results, but with the deduction that administration of the drug had been untimely or some other omission had been made inadvertently.

### RESULTS

As stated before, it is judged that all patients to whom the sodium amytal narcosis has been administered have profited therapeutically, some more than others. On reviewing our more than 200 cases, it may be reliably stated that about 80% of the patients have benefited by the therapy to a point where they personally recognized their improvement, not only 2 weeks after the conclusion of the treatment, but also as long as 18 months to 7 years later. Of the other 20% it may be said that the treatment was incomplete, should have been repeated, or a poor selection of patient had been made. It is not claimed that the therapeutic delirium induced by prolonged sodium amytal narcosis or the narcosis is in itself curative, any more than insulin hypoglycemia and the shock therapies are of themselves curative. They are, however, highly ancillary to the psychotherapy and the directive management of the patient.

### DISCUSSION

The precise reason why sodium amytal produces the narcosis that it does in the manner that it does and the way in which the delirium follows are still controversial matters. The various theories of sleep and its induction by drugs come in for consideration. Some probably would adhere to the semi-coagulation theory of Claude Bernard. Others might prefer the ingenious hypothesis of Bancroft and his co-workers. Whether we include or exclude the thalamus and the hypothalamus from our conjectures is also debatable. Personally, I prefer to adhere to a simple interpretation such as arrest of cellular metabolism in some manner

and degree. I prefer even to omit, and in this regard prefer only to mention that tissue oxidation or lack of it may be a factor in such cellular metabolism.

The therapeutic effect of the narcosis or the recovery of the patient from it seems, in the first place, to make the patient wholly dependent upon his physicians and associated personnel. This total resignation on the part of the patient to forces outside of his own control should probably receive more credit than is usually given to it.

The fact that in his narcosis the patient sleeps at a much deeper level than he does naturally probably arrests much of the subconscious activity, and possibly some of the unconscious psyche, thereby bringing into a state of rest various processes of personality integration. When the narcosis has lifted with an intermediate delirium, the various former personality formulations must be remobilized and rearranged. We judge that it can be reliably stated that such reassembling and rectification are always in the direction of normalcy. Naturally, the best reintegration is obtained under guidance of the interested physician and psychiatrist.

### SUMMARY

During the past 8 years we have used prolonged sodium amytal narcosis in the treatment of border-line neuropsychiatric disorders. The therapeutic technique is usually so planned as to produce a toxic delirium after the cessation of drug administration. This therapeutic delirium is judged to be reliably restorative and reconstructive. Various degrees of narcoanalysis and narcosynthesis are permitted, but most benefit follows delirious abreaction. All patients to whom the treatment was administered were helped, some more than others. Dissolution of the faulty personality behavior and constructive recasting of the psychiatric problem probably occur through improved physiological rest and a remobilization of thought processes during an irresponsible and impersonal state of psychomotor activity which is temporarily out of volitional control, and is thereafter always reintegrated at a more acceptable level.

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# PSYCHOTHERAPY IN CHILD SCHIZOPHRENIA<sup>1</sup>

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## INTRODUCTION

Child schizophrenia is now recognized as a psychopathological syndrome, and a number of confirmed cases have been reported in the literature. Several approaches have been used in the treatment of a fairly large number of cases, considering the relative infrequency of the disease: insulin shock, electric shock, metrazol, benzedrine, deep or light sedation, and psychotherapy, including psychoanalysis.<sup>2</sup> As a rule the therapeutic procedures are carried out in a hospital or specialized institution. Ambulatory treatment does not seem to have been tried with schizophrenic children as it has with adults. This presentation deals with the psychotherapy of 7 ambulatory cases, 6 boys and 1 girl, over periods ranging from a few months to 2½ years, with varying degrees of success. Furthermore, since not enough time has elapsed for follow-up evaluation, it is concerned only with methods and immediate results.

## I. SUMMARY OF CLINICAL DATA

Owing to time limitations, pertinent data on the 7 cases are briefly summarized:

At the time of admission, the ages ranged from 3 years 10 months to 7 years 9 months. In 3 cases (Thomas H., Peter K., Seymour W.), the onset was acute in a background of earlier adjustment that could not be described as normal although it was at first so reported by the parents. The onset was insidious, and the child was brought to treatment after several years of frankly pathological behavior in the 4 other children (Bernard D., Brian M., John N., Judith Z.). In the latter group, no precipitating factors were noted, and therapeutic help was sought mainly because of pressure on the part of the school, or as a prerequisite for admis-

sion. Poor adjustment, bizarre or disturbing behavior had prompted the request for treatment.

Information on the family background, though often incomplete and not fully reliable, pointed to a relatively high frequency of neurotic and psychotic illness in the antecedents, with schizoid characteristics fairly common among the parents. Although several of them were highly successful in their chosen work, none of the parents could be considered happy and well adjusted, either individually or in their marriage relations.

Careful physical and neurological examinations ruled out organic pathology in all cases. The 7 children presented frankly psychotic symptoms, and none could be considered as only schizoid personalities. At the time of examination, contact and affect disturbances were noted in all, with marked to total withdrawal of interest, and flattening or dissociation of affect as significant manifestations. There was bizarre and distorted thinking in all, and hallucinations were present in 4 children, with indirect and questionable evidence of perceptual defect in the other 3. Stereotypy, mannerisms and motor dissociations were observed in all 7 children, as were peculiarities in pitch, rhythm and modulation of speech. All children showed peculiar reactions to sound, sometimes a complete unawareness; or, on the contrary, they exhibited startle reactions to minimal stimulation. They showed a more than usual interest in and knowledge of music, and 2 were considered exceptionally gifted. While it was generally not possible to ascertain the intellectual level through psychometric testing, owing to contact disturbance, the early developmental history and observed behavior ruled out congenital mental deficiency.

## BRIEF OUTLINE OF PROTOCOLS OF THE SEVEN CHILDREN TREATED

1. *Bernard D.*: Insidious development over a period of years. An only child. Treated from 5 years 5 months to 6 years 6 months. Withdrawn after 66 therapeutic interviews. Out of contact; generally mute, not responsive, except for some

<sup>1</sup> Prepared for presentation at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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<sup>2</sup> See bibliography.

irrelevant mutterings; very rarely there were spontaneous, short, relevant sentences. He seemed to be unaware of people as people (climbed over them as if they were furniture). Bizarre behavior, including eating garbage, smelling strangers, etc. Auditory and visual hallucinations, some of which were associated with attacks of acute anxiety. Pre-occupied. Stared into space. Heavily tainted hereditary background on both sides of the family, from the point of view of neurotic and psychotic illness. A successful business man, the father had nevertheless suffered delusions of persecution and severe anxiety symptoms since adolescence. The mother had an emotionally deprived childhood, was compulsive, and had a strong drive for perfection, particularly expressed in her handling of the child. Birth was dry; high forceps were used. Psychomotor development was normal, but very early speech development presented abnormalities (could say difficult words, but did not use language for purposes of communication). The child had an extraordinary knowledge of recorded music. No psychometric test could be done, owing to poor contact, but the child seemed alert. He was brought up very rigidly and was kept away from children for fear of dirt and disease. Masturbation was severely suppressed. A traumatic episode involving sexual stimulation by his nurse took place when he was about 2 years old.

There was enough improvement in affective contact for the child to enter school and make a relatively good social adjustment there. The mother, pathologically identified with this child ("We enjoyed our measles; I got undressed and got right into bed with him."), developed considerable resentment over his relation with the therapist ("He plays with you as he doesn't seem to want to play with me.") and decided to withdraw him, claiming that the school was sufficient for continued improvement. At the last check-up, when the boy was 8½ years old, he had made little progress, and was travelling about with his mother.

2. *Thomas H.*: Acute onset in a background of poor adjustment. Older of two children. Treated from 6 years 5 months to 6 years 10 months. Twenty-three therapeutic interviews at the time of writing. Referred by the school physician, because of shyness, seclusiveness, peculiar behavior, lack of contact with other children. He had become totally mute at 2½ years, following a traumatic episode, and never recovered normal speech function. There were intermittent mutterings, usually not related to current situations. Shortly before admission he was found laughing, after having thrown out of the window a pet dog of which his younger sister was very fond. In the family background there was no evidence of mental disease; 3 of the grandparents (2 had died) suffered hypertension and heart disease. Both parents were fairly well adjusted, except for the mother's moodiness, tenseness, and tendency to worry. The father, an airline flier, was infrequently at home; and he did overseas duty for several months during the child's fifth year. Birth took place at nearly 10 months, by Caesarian section. Psychomotor development was normal,

with precocious speech development and extensive use of rhymes. Speech for communication was scant. Infantile habits, such as thumb sucking and masturbation, were dealt with severely. His social development seemed normal, except for a tendency toward shyness, until he was 2½ years old. At that time he suffered a severe burn while watching his mother prepare the 6-months-old baby's bottle. This was a very traumatic experience (as ascertained later, related to death wish toward baby sister); furthermore, it kept him away from children for several months. He became afraid of adults (especially doctors), would not mingle with other children, and became mute. As shown by observation and his teacher's report, he was of at least average intelligence. From the age of 2½ years to 6 years 5 months, he had little or no contact with other children; when exposed to them, he was impulsively aggressive and destructive. When he was first observed, at 6 years 5 months, there was no affective rapport, he shrank from physical contacts and approaches and was mute, except for explosive short sentences not relevant to current situations and which he uttered in a peculiar low-pitched voice. He was also prone to sing quite accurately a large variety of tunes. There was marked motor restlessness as he wandered about the room, at times whispering, with peculiar facial grimaces and mannerisms, such as putting his fingers on his closed eyes. At times, he seemed to hallucinate. He was not at first interested in toys but with a good deal of pressure began to use them. At the beginning of every session, he would put all the toys on the floor in a somewhat concentric arrangement, with the outer line always made up of all available planes, without paying attention to the observer, and shutting his eyes tightly when she addressed him. This was a symbolic activity of great significance which offered the initial opportunity for developing contact through interpretation of the seemingly non-functional play. (Recall that his father was a flier.)

Following the development of transference to the therapist, there was some improvement in this child's social contact, as reported by the mother and his teacher. He even began to talk in class, briefly, at intervals. He is still under treatment.

3. *Peter K.*: Acute onset in a background of earlier poor adjustment. An only child. Treated from 3 years 10 months to 5 years 1 month. About 60 therapeutic interviews. He was referred because of excited behavior and acute anxiety of approximately three weeks' duration. Prior to the acute onset, there had been a week of mild excitement related to some home difficulties. The acute episode took place in the course of a visit to the Museum of Natural History with his father, when he suddenly became upset while looking at totem poles. The following night he was sleepless and seemed in a daze. He spent the next two weeks alternating between a "stupor-like daze" and periods of excitement, during which he would scream or make such statements as "I can't be myself, I'm scared I'm not myself," or ask his parents to remove the rhinoceros and Indians with sticks, etc., from his room. He seemed to hear but did not answer. There was

considerable drooling, and blocking in his speech. He was given sedatives without results. Information relative to the antecedents was scant and considered inadequate. The maternal grandfather had a violent temper. The maternal grandmother, who lived with the family, wept easily, was compulsive and worrisome. She had taken an active part in the care of this child. The father had a good deal of drive. The mother was moody. She had a depressed episode shortly before her marriage, after hearing of the suicide of a strange woman in her house. She was emotionally dependent on her mother and markedly ambivalent toward her. The child was born after 13 years of marriage. Pregnancy lasted 8 months and was associated with maternal depression. Following the discovery of a congenital dislocation of the hip, the baby was in a cast from the age of 4 to 10 months. His complete immobilization made care difficult, and the maternal grandmother was brought in at that time. The mother felt guilty about this, and felt that her mother had taken her place in the child's affections. Labor was short, with middle forceps. The baby was "knocked out by mother's paraldehyde." Psychomotor development was precocious, and the child was of very superior intelligence. Many fears and nightmares, especially in the period following a herniotomy at 2 years 4 months, were reported. Masturbation was frequently noted, usually associated with a dazed expression. He had always been destructive and difficult to manage—related to a large extent to the obvious conflict between the mother and the maternal grandmother. Also, he had severe temper tantrums at various times. He showed a marked interest in music and was able to recognize themes and titles in a large collection of classical records. When first seen, he presented all the earmarks of acute schizophrenic illness: he was out of contact, his behavior was autistic, and at first unintelligible; he had auditory and visual hallucinations, generally associated with acute anxiety; alternating with periods of mutism, there was pressure of speech with a peculiar pitch and modulation. Neologisms were numerous. Motor restlessness was marked, alternating with catatonic posturing and drooling.

Throughout the first 9 months of therapeutic contact the mother was present at the interviews, owing to the child's extremely disturbed behavior and the mother's own severe anxiety at the prospect of separation. The child improved to such an extent that he was able to attend school part of the last nine months, and he made a relatively good adjustment there. Following a 3 months' absence in the summer, treatment was resumed along customary lines and the child was seen without his mother. There was complete recovery from the acute episode, with a sequela of neurotic anxiety for which he is currently being treated. Adjustment at school is now good.

4. *Brian M.*: Insidious development over a period of years. Second of 3 children, 2 boys living. Treated from 7 years 2 months to 7 years 8 months. Withdrawn after 10 therapeutic interviews, allegedly because of difficulties in transportation.

However, the psychiatrist to whom he was transferred thought that the female psychiatrist was "a threat to the mother," who had emphasized to him the good rapport of the child with his first therapist. The patient was referred by the school for bizarre behavior, facial grimaces, irrelevant speech and activities. Information about the hereditary background was considered inadequate. The father, a brilliant writer and public speaker, had an obsessive drive for power and achievement. The mother was so much on the defensive that it was difficult to get a true picture of her personality, but one was impressed with her emotional blunting and inability to give warmth and affection. She seemed to have had great difficulty in recovering from the loss of her first child shortly after birth. There are indications that the mother was apprehensive about the birth of the patient; however, labor was easy. The child had pyloric spasms, was always a feeding problem, and developed eczema at 6 months. Very early he showed an exaggerated reaction to noises, especially the human voice. He was always physically timid. At 2 years his speech and language development presented peculiarities; a psychologist who was consulted at the time stated that the child preferred to express himself in song. At the present time he is considered a musical genius. He began to develop facial tics at about 18 months. At 3 years he had a very large vocabulary and showed pressure of speech. Cyclic vomiting was present intermittently between the ages of 2 and 6 years. When he was 3½ years old, a brother was born; he was considerably disturbed by the absence of his mother and spoke about her as if she were dead. Through the years he had a fear of death with varying degrees of intensity. Between the ages of 1 and 2½ years, he was kept from contact with children by his father's old nurse who took care of him. His social adjustment was always poor. He never made friends, did not seem to notice other children, was withdrawn most of the time. Already considered abnormal by several psychologists and one psychiatrist, at the age of 2, he was not brought to treatment until the school (at 7 years) made treatment a prerequisite to continued attendance. When first observed, this child was apprehensive, restless, spoke in a peculiarly modulated voice, at intervals was preoccupied and out of contact. There was considerable pressure of speech. Numerous neologisms, incoherence and irrelevancy were marked. He was at least of high normal intelligence, as evidenced by occasionally relevant utterances and an unusually extensive vocabulary. (Psychometric testing was not attempted, owing to paucity of contact.) Obsessive thinking and activities about feces and flatus, and a touching compulsion were observed.

While there was little or no change in his behavior, contact with the therapist was attained. The complex symbolism of his thoughts, phantasies and drawings was becoming intelligible.

5. *John N.*:<sup>3</sup> Insidious development over a period of years. Oldest of 3 children, 2 boys living (second child still-born). Treated from 7 years 9 months

<sup>3</sup> This case is to be published in full.

to 10 years 5 months. Over 200 therapeutic interviews. His social adjustment was poor, and he had been rejected by several schools. He was on the verge of being dropped by a private school because of bizarre behavior and inability to establish contact with children and teachers. The hereditary background was heavily tainted with neurotic and psychotic illnesses in the direct and collateral lines. Both parents were brilliant, with schizoid characteristics. Marital adjustment was poor. In utero the patient was not as active as his siblings. Labor was prolonged. He was not interested in sucking, and was always a feeding problem. Psychomotor development was normal, except for relatively late speech development. At an early age he was, and has continued to be, interested in the phonetics rather than the content of speech. There was still occasional enuresis at the time of admission, and he also deliberately voided in the midst of family gatherings, or in public places. He had numerous fears at various times. His behavior was already considered abnormal at 4½ years, when he was first seen at a mental hygiene clinic. In various nursery schools and kindergarten, attended since the age of 3 years 5 months, he did not seem to know how to play, was fascinated by toilets, masturbated frequently, and was a constant problem socially because of lack of contact, but was "intellectually far beyond all expectations." For instance, he learned to read by himself. Very early he showed an interest in music, and at the age of 4 years he was able spontaneously to improvise and reproduce complex melodies, although it was not possible to teach him music owing to lack of rapport, and his musical productions were conspicuously disorganized. He was considered a musical genius by professional musicians. When first seen, he presented a picture of acute anxiety with anxious facial expression, moist skin, marked motor restlessness, excited jumping associated with extraordinarily dissociated and nonfunctional motor patterns of the head, arms and trunk. As a reaction to auditory hallucinations, he put his hands over his ears or put his fingers in the canals, made grimaces and muttered. There was marked autistic behavior involving thinking, speech, and motor patterns. He was heard muttering to himself and laughing irrelevantly, with no awareness of the observer's presence. There was no spontaneous contact. He was prone to smell and lick any part of the observer's clothing or body when he happened to be near her. There were obsessive thoughts about bathrooms and toilets, and neologisms were numerous. Verbal productions generally were irrelevant and uttered in a peculiar voice with odd patterns of phonetic rhythms. When he made use of toys, it was in a nonfunctional way.

This boy showed a definite improvement, although he continued at times to be preoccupied. Whenever he became upset or frustrated, he was prone to have a brief recurrence of some mannerism. He also tended to be compulsive and had constricted interests and activities. The motor restlessness lessened considerably, and he was able to attend school for over two years, where records indicated slow, gradual improvement in his social adaptation

and contact, as well as in scholastic achievement. However, it was in his musical interests and activities that his progress and integration were best reflected. He became related to his music and for the first time was able to take musical training. It is felt that his musical abilities can now be utilized for future professional attainments, and individual integration.

6. *Seymour W.*: Acute onset in a background of maladjustment. Oldest of 3 children. Treated from 7 years 7 months to 8 years 5 months. Approximately 60 therapeutic interviews. Prior to the initiating of individual treatment, he had been for one year on the ward of a psychiatric hospital, where the diagnosis of schizophrenia was made. When observed, he was out of contact. There were irrelevant speech and laughter, obsessive concern with toilets, a large variety of mannerisms, and he did not respond to the therapist's approaches. Frequently he muttered to himself in a peculiarly pitched and modulated voice, and used neologisms freely. Information about the hereditary background was considered inadequate. Both parents had limited intelligence and constricted interests. They emphasized that there had never been difficulties in the home until the onset of the child's illness. The mother, who had had an unhappy childhood, showed considerable drive toward perfection in the bringing up of her children. Birth was uneventful, after three weeks' delay; psychomotor development was normal. There was a good deal of thumb sucking, which the parents attacked with a variety of methods but without results. There was a relapse in bladder control at 2½ years, coincident with the sister's birth, and enuresis was among the presenting complaints. There was intense jealousy and difficult behavior at the time of his sibling's birth, and three or four months before this event he had become unusually quiet. This was probably coincident with being told about the expected baby. He showed many fears in the course of his development, and social adjustment was always poor. At 4½ years, a psychiatrist suggested play therapy—a suggestion which was not followed, and the mother felt guilty over this. Refused admission by several nursery schools, at 6½ years he finally attended a Hebrew school. There he had acute anxiety attacks related to his fear of using strange toilets. This fear was intensified by the threat of a teacher that he would nail him down on the seat or flush him down the toilet if he did not attend to his needs like other children. He had a marked interest in and knowledge of music and some of his delusions involved identification of human beings with radios.

The child developed a good rapport with the therapist, and increasingly longer periods of relevant thinking and speech expression were noted. He had been in a private school for a short while when the school was closed, so that social contacts were limited almost exclusively to his family. Although he was still difficult to manage, because of autistic and aggressive behavior, there was improvement in this area. He was later admitted to a

special day school where, after a difficult period of adjustment, he showed improvement in contact and ability to learn. He is still under treatment.

7. *Judith Z.*: Insidious development with an acute exacerbation. Older of 2 children. Treated from 5 years 6 months to 6 years 4 months. Withdrawn after 44 therapeutic interviews, allegedly for financial reasons. After a period of observation at a children's hospital, she was referred for treatment, with the following presenting problem as formulated by the examining neurologist: "She is mute most of the time, sometimes she answers questions distinctly. Echolalia—usually when asked questions she starts the question in an almost inaudible whisper, almost synchronously with the examiner. There is scarcely an interval between the words of the examiner and the patient. Irrelevancy of speech—patient's mother has reported statements having no bearing on the subject of conversation. Auditory hallucinations—patient's mother reported that while at her bedside she stared up at the wall and repeated the question 'what'; patient's father reported that while at home prior to admission she once cried out, 'Get those people out of my room.' Negativism and resistiveness—at times when being examined, especially with tongue depressor, she screams impulsively. Bizarre acts, such as sitting in crib with blanket over head. There is incontinence of urine at times. She requires spoon-feeding usually." Information relative to antecedents was considered inadequate. The father, an only child, had been spoiled, was immature and domineering. The mother was an apprehensive, insecure young woman who was inhibited by fear of her husband and his family. There had been considerable conflict between the paternal and maternal families, owing to clash of personalities and divergence of religions and traditions. Labor was long. Breech presentation was followed by version. The baby had a cyst on the anterior fontanel, of which there was residual evidence. The child needed stimulation at birth. She gained rapidly; her psychomotor development was precocious, especially with regard to speech. Bowel control was achieved at 7 months. However, bladder training was difficult and at the time of admission she was still wetting the bed frequently. Masturbation must have been repressed early and effectively, judging by the mother's indignant tone in her denial of this habit. Since approximately 5 months of age, there had been noted frequent rocking associated with "staring into space." The birth of a sibling at 2 years 9 months was reported as having been uneventful. At that time, however, there was a series of illnesses, principally affecting the upper respiratory tract. She also began to act phantasies—such as, she was married and had two children—so realistically that the parents experienced a good deal of concern. She did not play with other children. It was not clear whether she could not or did not for lack of opportunity. When she was 4 years old she was "living in a world of her own"; and in a group of children she would stand aside and watch them rather than play with them. She was always a feed-

ing problem; she was so active as to make handling difficult; she had numerous fears, generally at bedtime. At 5 years, 6 months before her admission to the hospital, she had a severe case of measles, following which she became still more seclusive. She developed auditory and visual hallucinations and asked to have "eyes" removed from the walls of her room. She became mute; "she began to do things that were definitely odd." When first observed, at 5 years 6 months, she was out of contact most of the time, appeared to be listening to voices. Echolalia, echopraxia were noted. Pitch was peculiar. There was perseveration of motor activity and speech and marked motor restlessness. There was a tendency toward catatonic posturing, and no relevant response to the therapist's approaches. There was marked dissociation of affect, and neologisms were frequent. She had a very large vocabulary and an extensive repertoire of popular and classical musical works which she sang and acted dramatically.

Some improvement was noted, in that the motor restlessness had decreased considerably, and contact with the therapist showed progress. The mother also reported that the child's rapport with her parents and sibling was increased.

## II. CONSIDERATIONS OF THERAPEUTIC METHODS

It has long been thought that schizophrenic patients could not develop a transference relation with their therapist. However, the reports of Zilboorg (14) and Frieda Fromm-Reichmann (6), among others, indicate that such a relation can be established. The patients treated by these authors were hospitalized adults, but the rationale of treatment of ambulatory schizophrenic children is the same—whether psychoanalysis or other type of psychotherapy is selected as the method of approach.

If the outstanding feature of childhood schizophrenia is the loss (or lack) of affective rapport—and the majority of authors are agreed on this point—the rationale and prerequisite of therapy must be first to establish contact. To this end, a variety of means can be used, so long as they allow the therapist to break into the child's autistic world: silent participation, acceptance of all mannerisms including those related to excretory functions, imitation of the patient's words and gestures, in fact any attitude which, without threatening the child's precarious security of his locked isolation, may impart to him the feeling that his behavior is understood and accepted. Immediate interpreta-



tion is usually not available, since the very nature of schizophrenic illness makes the child's behavior unintelligible. Nevertheless, it is the apparently meaningless maze of rituals, mannerisms and neologisms exhibited by these children which makes it possible eventually to penetrate their autistic world. A careful history often provides clues for the interpretation of bizarre attitudes, especially when considered in the light of minute details of moods, motor patterns, facial expressions, speech utterances or silences observed in the therapeutic interviews. For instance, when 4-year-old Peter K. shrieks, in an acute panic, "Don't put pennies in me," his thinking and feeling experience is at first utterly incomprehensible. A typically schizophrenic process, this psychopathological deviation (delusion) is in essence the end result of a condensation phenomenon. All the elements necessary for an analysis and understanding of his apparently irrelevant and autistic behavior do not present themselves in proper sequence and relation, but they appear either in the anamnestic material or the observed behavior; they may also emerge as a result of various hypotheses brought to the attention of the parents, and confirmed in part by them after specific inquiry into obscure areas of the early development. As obtained through these various channels, it is eventually learned that: 1. The child has hallucinated "a little old lady" who wanted to do him harm. . . . 2. The little old lady was traced to a traumatic episode in his recent past (he was frightened the previous summer by a strange woman who had a dilapidated appearance), but also identified with his grandmother who had taken care of him since infancy. . . . 3. When she came to live with his family, the grandmother brought a dog which terrified the patient, and with which he identified at intervals, when he went about biting people. . . . 4. The grandmother read to him, over-dramatically, with the child in a sort of trance, the story of "The Three Little Pigs," and at times the patient identified with a little pig eaten by a wolf. . . . 5. Finally, the child owned a "piggy bank" in which the family and visitors were accustomed to put pennies, and the sight of this toy had recently thrown him into such a panic that

his parents finally removed it to some inaccessible place. It is obvious that the child was going through a terrifying experience, and it was only the unravelling with and for him of the complex condensation patterns that relieved the anxiety bound up with them. Over and over, the material was held and abreacted, every fragment singly and in combination with others, and the piggy bank itself was brought to the play room in one phase of the therapeutic development.

The analysis of another autistic manifestation, in 8-year-old Seymour W., is also briefly reported for purposes of illustration: For several weeks the patient made "irrelevant" gestures toward the gluteal region of people, familiar and unfamiliar, who came within his reach. This caused his parents to be disturbed, punitive and inhibitory, which increased rather than stopped the activity. When he made this gesture toward the physician and she asked why he was doing it, the child in a panic cried, "I won't do it again, I'll be a good boy!" a stock phrase, expressive of his guilt feelings, and which he used profusely with his parents. She reassured him that she did not mind his activity, that he could go on with it all he wanted to, but she would like to know the reason for it. As might have been expected, this brought no immediate response, but on careful observation it appeared that the gesture was a "winding" gesture. Several other observations had previously been made, which seemed to have a bearing on the autistic behavior: 1. He was obsessively concerned with good and bad radios, green and brown radios. . . . 2. He expressed obsessive interest in, also anxiety about, the bowel function. . . . 3. He mentioned several times that a hypothetical boy, "he" (himself, obviously), was singing, reciting and keeping everybody up. . . . 4. At intervals he sang melodies which seemed exact reduplications of parts of radio programs. . . . 5. He made drawings of radios, in which facial features and winding knobs were prominent, and to which he occasionally added feces. . . . 6. Recurrently, he expressed anxiety about his "meckey" (in turn, penis and feces) being washed down the toilet by a rabbi, which, incidentally, kept him at intervals from moving his bowel several days in

succession. . . . 7. He objected to the physician's singing a certain Christmas carol, although he occasionally sang it himself. It was not until the latter fact was utilized in the therapeutic approach that an understanding of the autistic activity was gained. Once, as he began the "winding" gesture in the accustomed pattern, the physician deliberately started to sing the Christmas carol. The child, in a panic, cried, "Doctor D. is not a radio—I don't want her to be a radio." Thus, it was obvious that what he had been doing right along was winding people as radios, or testing them as people-radios. Besides the reassurance that the physician was not a radio but a person who was very fond of him, the interpretation was over and over given to him of the several fragments bound in his autistic gesture. While the castration anxiety, the confusion over animate-inanimate objects, male and female sex, anal and genital birth, and other pathological expressions obviously formed the background of this autistic gesture, the understanding of this gesture made possible the breaking down of condensation patterns which had served to isolate the patient from the outside reality world, and also rendered his behavior unintelligible.

Repetition is an essential requirement of therapy, with these very disturbed children, as it is an essential requirement of learning and maturation in the very young normal child, but to an even greater extent. The young patient may appear to have grasped an interpretation given him, and react as if emotionally able to absorb it, later to revert to some form of regression seemingly in contradiction with the progress recently achieved. Indeed, one is sometimes in doubt about the latter, until further observation indicates that some gain has been retained in spite of the apparent loss.

Regression in schizophrenic illness is not a regression *in toto*, and this is perhaps more clearly shown in the child than in the adult. There are specific areas of excessive affect binding, with the regressive patterns appearing unevenly. Neologisms and other autistic forms of expression would thus represent the end results of phenomena of condensation, transfer, substitution, fixation and dissociation of affect; they seem to have be-

come separated from the whole psyche and assumed a meaning of their own, in appearance nonfunctional and noncommunicable.

Breaking into the autistic world of the schizophrenic child often provides the first "sharing" (a beginning in human relationships) he has experienced since his illness was well established. While on the surface appearing oblivious to the outside world and relatively settled or fixed at a compromise level, he is actually in a state of constant conflict, and his anxiety is overwhelming. This "sharing" is the first step toward bridging over to the outside world, and for a long time it is the only contact, however slight and fleeting, he is capable of developing. An illustration is seen in the case of Peter K.: About 2½ months after the initiating of treatment, his mother reported that on the previous day at home he had attempted to reach with a broomstick the ceiling light, in which he had previously hallucinated rhinoceros and totem pole faces. At this point, however, he seemed to be testing reality. His mother, fearing that he might injure himself, suddenly snatched the stick; in so doing, she broke the bulb and injured her hand. The mother had been very upset and handled the situation inadequately. Anxiety and guilt feelings obviously had been aroused in the child. Indeed, on that day he showed more withdrawal and preoccupation than on previous interviews, and the therapist deliberately brought up the traumatic episode for abreaction. The child immediately said, "You should have hurry up," indicating that in this time of special stress he had conjured up the therapist's help.

An *active* approach on the part of the therapist is particularly necessary in the initial phase of treatment; generally speaking, it is also indicated, at all stages, to a greater extent than in the treatment of neuroses or behavior disorders. Transference is usually established after considerably longer periods of treatment than is the case with any other mental illness, and it also requires more affection, patience and alertness on the part of the therapist than in other mental illness. When it develops, transference seems more intensive (probably because emotional relations with the outside world are so restricted) than is the case with neurotic chil-

dren. Peter K., who was throughout articulate, even when unintelligible, protested as the therapist was preparing him for the summer's absence, "Don't you ever say goodbye to me!" Seymour W., as he emerged from a world in which emotional relations with persons have no place, asked with a bewildered expression, "Am I your little boy?" Once established, transference plays its usual rôle as a therapeutic instrument, but at the same time it may be an additional obstacle to therapeutic progress, in that it represents a threat to frustrated and very disturbed parents. For this reason, close contact must be kept with the parents in order to interpret the child's behavior and, in particular, to anticipate and render more acceptable the increase in regressive, hostile or antisocial patterns which may appear coincidentally with improved contact. Release of maternal guilt is throughout an important item in the therapeutic procedure. An interesting aspect of ambulatory treatment has been that asocial and antisocial patterns shown in public places, to and from the office, have been less than was anticipated, even when regression and autistic expressions were coincidentally very marked in the therapeutic situation.

In the course of treatment, phases of earlier emotional development are relived; although not in their original form, and in spite of pathological distortion, they are still readily recognized. For instance, the "I-not I" phase of individuation anteceding the ideo-affective organization of language in the normal 2-year-old is clearly identified in Seymour W's anxious struggle which followed a long period of bizarre thinking, neologisms and inarticulate language, as he said, "I am me. . . . If I am me, I am not you."

Results have been encouraging and, while the prognosis remains guarded, it seems that ambulatory treatment of schizophrenic children, whenever feasible, presents advantages over treatment in institutions, as separation from the home achieves further severance from whatever minimal contact may have existed prior to the initiation of treatment.

## SUMMARY

Seven schizophrenic children, 6 boys and 1 girl, received ambulatory treatment, psychotherapy, over periods ranging from a few months to 2½ years, with varying degrees of success. Summaries of the 7 cases are presented, with emphasis on therapy and progress. On the whole, chances for relative recovery and adjustment seem to be greater than is the case with therapy in institutions.

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## PREJUDICE AS A SOCIOPSYCHIATRIC RESPONSIBILITY<sup>1</sup>

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Only very recently have psychiatrists come out of their offices and expressed their feelings and understanding of interpersonal relations as they pertain to the complicated emotional pressures and reactions in the community and the world. Franz Alexander at the 1943 meeting of the American Orthopsychiatric Association in a symposium on world government pointed out among other things that the political insecurities and reaction to fundamental needs on the part of small and weaker nations was analogous to the reactions of children in various types of family groups. Kenneth Appel has written extensively on the psychopathological reactions of nations. Karpman and others have contributed to our understanding of the emotional factors in prejudice and Dr. Alport of Harvard has devoted almost all of his recent writings to the subject of bigotry and prejudice; the most recent being his editing of the March 1946 *Annals of the American Academy of Political and Social Science*—a volume limited to the discussion of prejudice. Freud's "Psychopathology of Everyday Life" of course introduced much of our fundamental understanding of interpersonal relationships.

However there continues to be more research in and more presentation of papers on the alleviating of symptoms of schizophrenia than on the understanding of some of the emotional pressures and community frustrations that may have a good deal to do with the etiology of that dreaded and malignant disease. None of us is surprised. It is much more simple and almost entirely without personal emotional threat to study complete physiological changes and reactions or record the various modifications of behavior as the result of myriad shock procedures. But the study and understanding of a community emotional illness in which we, too, may be involved, is so threatening

that to hide our collective heads in psychologically rationalized sand has become the accepted and conventional procedure.

It is not my place to discuss the political or the economic factors in the etiology and maintenance of prejudice. The emotional factors as psychological reactions, not moral, have an equally important role in this etiology. Many attempts by non-psychiatrically oriented individuals to discuss the emotions of prejudice have always deteriorated to discussions of moral issues involved and have, of course, collapsed under their own breast-beating. The psychological factors in prejudiced reactions take on definite patterns that are as coldly scientific as the number of red blood cells in a centimeter of blood. The investigation also must be done in a scientific and unemotional way so as to stay clear of contamination by politics, economics or personal feelings.

Much of the relative neglect of investigation into the causes of prejudicial feelings can be directly placed on the investigator whose personal fears will not allow participation or even interest in a subject that may very well demand, as he proceeds, a sort of self-analysis or a very unsatisfactory anxiety producing series of rationalizations.

I shall not attempt in this very brief paper to give results of an exhaustive investigation, but instead I shall try to outline a point of view and suggest methodology and responsibility of the psychiatrist in this important phase of the welfare of mankind.

Certain important factors stand out. First of all, the fallacy that we are all created equal, which can be interpreted as actually a fear of being different. The feeling that those who appear, act and speak differently must be inferior is based primarily on the fear we have of these people because we do not know or understand them. The feeling or expression of their inferiority is an aggressive and hostile one and as such is motivated by the insecurity aroused by not knowing.

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

A new member of any group regardless of his race, color or religion is immediately under suspicion and looked upon with some misgivings. He is never completely accepted until he is known. This is not an unusual procedure, and in normal emotional growth the child is frequently faced with new and unknown persons or things from which he either withdraws or whom he attacks. When understanding replaces newness, fear and its reactions are replaced by participation. Difference no longer is a barrier, but a constructive stimulus for healthy emotional growth.

Unfortunately, all the forces in the family, or in a larger sense the community, are not so set up that the child or citizen can gain positive strength in his drive to understand and solve the new, strange and different things in his environment. The parents or parent persons such as teachers, policemen, politicians, the church, etc., have not resolved their own conflicting feelings about new and different things. They, too, are insecure and dependent and searching for supportive strengths. And they, in a larger sense, are denying the existence of difference by trampling upon it or avoiding looking at it. Because of this immaturity on the part of the parent person, the difference becomes a negative factor in emotional growth. Fear of this difference increases and aggressive reactivity to this fear becomes an accepted and acceptable behavior pattern.

Let me give as an example the reaction to racial differences of an emotionally healthy child of 4—of fairly well integrated parents. This child has seen people of many different races in her home. They have all been people. She was never forewarned not to mention their differences in their presence. There was no variation in her shy reactions when introduced to people the first time. The shyness did not wear off faster or slower or change in intensity in relation to the color or physical characteristics of the new people. Soon they were all her friends. A crisis occurred one evening when a particularly dark-skinned Negro was in her home. She said to her father, "My, he's black, isn't he?" The father agreed, but no attempt was made to warn her about mentioning this outstanding difference any more than she would have been warned about mentioning

someone's blond hair or bald head. It was not bad to be black, it was not a sign of distrust, it was nothing to be concealed, and so it was immediately accepted as a positive difference and not mentioned again during the evening. As a matter of fact, the child and this man became good friends.

A less integrated father—a man who retained certain fears of difference and had little understanding of other racial groups might have laughed, made disparaging remarks, or even warned the child about such men and the gulf of non-understanding would have widened and fear replaced emotional growth.

This brings me to the second large factor in the psychology of prejudice. There are some who cannot, regardless of opportunities and education, allow themselves to know and understand others. These are the fringe who have not quite been completely accepted by groups themselves. They may have some personality difficulty that does not allow positive personal relationships; they may not be completely acceptable because of the artificial standards of the group itself—such as exclusive clubs; or they may have or be concealing racial or religious backgrounds that would identify them with a minority. For example, the Jew is anti-Negro and the Negro anti-Semitic. The Reformed Jew of German or Spanish background who feels he is just beginning to be accepted is anti-orthodox and anti-Russian Jew. There are always the "shanty" and "lace-curtain" Irish and more recently in large cities have appeared West Indians in contrast to Negroes.

The second group composed of those who are never certain of their position and acceptability, are the most difficult to do anything about and by their activity, crystallize nebulous and unconscious fears in the majority. Because they feel more threatened by minorities, they are more active and verbal in their aggressive feelings and the more secure majority then finds an outlet when it is threatened and can focus all of its own doubts and unresolved conflicts on the unknown minority. They are the Gentiles who look Jewish and, unable to accept this, become violently anti-Semitic to prove to the world their non-Jewishness and then develop and organize large groups to give them

strength in this endeavor. They are also the neurotic individuals who afraid of their own sexuality spread rumors of the sexual atrocities of Negroes. The Negro, by virtue of not really being known, is a common enough sexual symbol to those to whom sex, too, is not understood and therefore something to be feared.

All of these individuals, who because of their immaturity cannot accept differences, must set up artificial programs of sameness and exclude all others. This protects their status quo and makes the much more difficult job of emotional maturation unnecessary for existence. Because of this attempt to stimulate an intrauterine existence which is truly non-differentiated, the resistance to any introduction of differences is tremendous and results in segregation and in some instances overt aggression.

One more aspect of this problem must be considered. The reaction of the group discriminated against. All of us struggle in our growth process toward overcoming our feeling of difference and finally being accepted by some group. Non-acceptance, of course, increases one's insecurity and feelings of difference. Sometimes the reaction takes several positive forms—the difference is intensified by those excluded forming their own groups—an aggressive form of segregation; or by virtue of outstanding individual performances, individuals can gain special recognition. The latter can be carried as far as the "honorary Aryan" status given certain Jews in Germany because their skills were needed by the *Wehrmacht*.

On the other hand if the minority individual or group cannot react positively, aggressive and destructive reactivity becomes the method of intensification of difference. The gangster activity of certain middle European American immigrants, behavior problems in discriminated against school children, or the more acceptable political activity of the Irish and the numerous Jewish, Negro, Italian and Irish boxers are several examples.

The every day living of the average Negro is filled with so many tensions and frustrations that it is amazing that any can live in our culture and not develop serious emotional maladjustments. When the white person of any religious group wonders where he will

have lunch, the Negro must determine where he *may* have lunch—the quality and price of the food being secondary. Finally when he is in a restaurant, he wonders whether he is being served quickly because the service is good or because they want to get rid of him. Conversely when he waits without service, he wonders if all the waiters are busy or he is being slowly but surely discouraged. These tensions gradually, by means of many defense reactions, become less conscious, but the anxiety in some form or another remains. Isn't the etiology of this widespread endemic neurosis a psychiatric problem and responsibility? The psychiatrist must begin to take the blinders off and look for and eradicate etiologic agents that cannot be worked through on the chair or couch.

The war and postwar shift in population has forced recognition of these tensions where fluid segregation no longer allows our conniving at the problem. As an example, Vancouver, Washington, a city of 50,000, had three Negroes before the war and now has 8,000. It is up to us to help the old established majority populations to know and understand these new and for the most part frightened people. They must be helped in understanding that the apparent aggression of the Negro is a reaction to fear of again being segregated, deprived of equal opportunities and physically threatened. They must be helped too, in understanding their own attempt at segregating is based on fear and that the bogey of real estate deterioration is based on this malignant segregation process in a vicious circle.

Fleetingly we have touched upon the ever present emotional action and reaction of our heterogeneous culture in which acceptance and recognition of differences is one of the major steps toward the accomplishment of individual and communal emotional maturity. It is obvious that although political and economic factors have been avoided in this very brief discussion of prejudicial reactions, that economic and political uncertainty is an outstanding factor in the production of individual and group insecurity. This constant bogey of insecurity is then of necessity translated and projected onto everyone and everything that by its very difference is immediately a threat. The emotionally secure child who

can receive ego support from a strong parent learns to accept and understand differences. The insecure child intensifies his feelings of difference and insecurity by projecting his fears onto the changes in his total environment. In our form of dependent culture, political certainty and economic security become the strengths necessary in our continual drive toward emotional maturity.

The crisis of war and its resultant economic and political upheavals have increased the dependency needs of groups and individuals. One cannot accept differences when one is searching for one's own security. In this search differences are intensified by the tighter organization of groups so as to better resist the threats of other groups. This suspiciousness and distrust extends beyond racial and religious differences—labor and capital, liberal and conservative, American, Russian, English instead of accepting differences and establishing a working, practical, mutually participating and inter-dependent society, see their differences as insurmountable threats, become more aggressive in their reactions to each other and search for some security within themselves. Skudder McKeel has statistically demonstrated that those who are anti-Jewish and anti-Negro are also anti-labor, anti-Russian, anti-English and of necessity, anti-United Nations. The United Nations ideal in itself is a mature, positive acceptance of differences.

It is apparent then that in this world, where insecurity and prejudicial reactions are increasing and the release of atomic

energy adds to the general anxiety, the psychiatrist cannot be smug and content. He cannot remain in his office and feel that the very few adults and children he may help toward a more integrated emotional maturity is his full contribution toward a more mature and complete society. He must realize that group therapy and inter-dependent understanding in its largest sense is his responsibility. He must put into practice his own understanding of the emotional factors in education. He must participate with those actively working toward a breaking down of political and cultural isolationism—if only to help these groups understand psychological pressures and reactions.

By this participation, it is hoped that the psychiatrist can really contribute to the gradual elimination of the barriers to our collective emotional maturity so that differences can be utilized and accepted and that discrimination and its aggressive reactions become a rare, delimited and curable disease.

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# CONVULSIVE SHOCK THERAPY IN PATIENTS OVER SEVENTY YEARS OF AGE WITH AFFECTIVE DISORDERS<sup>1</sup>

C. B. WILBUR, M.D., AND A. FORTES, M.D.<sup>2</sup>

The value of convulsive shock therapy in affective disorders was first reported by Bennett in 1933(1). Since this time innumerable reports have confirmed the therapeutic value of the treatment. Some reports even claim a certain specificity in the therapy of affective disorders.

Reports of the use of convulsive shock therapy in the aged are few. Robinson (2) in 1941 reported a series of patients, all over 60 years of age, 16 of whom were treated with convulsive shock therapy. Of these 16 patients, 14 made complete recoveries and 2 made social recoveries. In a follow-up study made 6 months after discharge, reports were obtained on 10 of the original 16; 7 had remained well, 2 had relapsed and 1 had died. The oldest patient in the group, aged 84, made a sustained recovery. Bennett(3) in 1941 reported successful results with the combined use of curare and metrazol in aged patients. In 1945 he reported (4) briefly on 25 patients past 70 (the oldest 83). The present report includes these patients in a more comprehensive survey.

Evans(5), reporting on a group of older individuals, listed 5 patients over 70 years of age. These individuals were not segregated in the total report. However, Evans suggests that convulsive shock therapy is not attended by undue risks in the aged.

Mayer-Gross(6) states that electric convulsion treatment can be used without undue risk in the aged. He believes that the treatment is justified by the recoveries or improvement obtained. Of 76 cases in his report, 14 were over 70 years of age.

Although older patients and patients with cardiovascular disease show an amazing ca-

capacity to tolerate the treatments well, preliminary curarization affords additional necessary protection. The definite risk of fractures in old, brittle bones is obviated by adequate curarization. This was aptly demonstrated by the case of a patient not included in our group, 68 years of age, who was unduly resistant to curare and obtained no obvious muscular relaxation from the injection. Electroshock was nevertheless administered and the patient sustained a compression fracture in the thoracic spine.

Patients with serious organic complications in addition to cardiovascular disease have also been successfully treated, as re-

TABLE I  
DIAGNOSES

	No. of patients
Diagnostic classification:	
Manic-depressive psychosis, manic phase.	3
Manic-depressive psychosis, depressed phase .....	4
Agitated depression (involutional type).	14
Senile depression .....	6
Reactive depression .....	3
Total .....	30

ported by Bennett(7) in 1944. Curare modification has, therefore, made possible the treatment of individuals with disabling affective disorders complicated by organic disease or defects connected with age.

In this study all case histories of patients 70 years of age or older who had been treated by convulsive shock therapy were reviewed and 30 cases of affective disorders were collected.<sup>3</sup> The presenting diagnoses are shown in Table I. Many of these patients were referred by physicians with a diagnosis of organic brain disease or senile dementia. The age range is shown in Table II.

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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<sup>3</sup> These patients were observed in the psychiatric department of the Bishop Clarkson Memorial Hospital, service of Dr. A. E. Bennett.



TABLE II  
AGE DISTRIBUTION

Age	No. of patients
70 .....	4
71 .....	7
72 .....	3
73 .....	3
74 .....	2
75 .....	3
76 .....	2
77 .....	2
78 .....	2
80 .....	1
83 .....	1
Total .....	30

Not one patient in the total group failed to have some complicating organic disease. To be sure, 4 of the 30 patients suffered from arteriosclerosis alone, but 26 had 2 or more organic difficulties. Table III is a survey of these complications.

TABLE III  
COMPLICATING ORGANIC DISEASES

Disease	No. of patients
Cardiovascular diseases:	
Arteriosclerosis .....	19
Hypertension .....	12
Heart disease .....	7
Renal arteriosclerosis .....	1
Peripheral vascular diseases .....	4
Surgical lesions:	
Hernia .....	2
Hydrocele .....	1
Tumors, including carcinoma .....	3
Respiratory diseases:	
Chronic bronchitis .....	1
Gastrointestinal diseases:	
Cholecystitis .....	2
Muscular and skeletal diseases:	
Arthritis .....	6
Deformities .....	2
Kyphosis .....	2
Neurologic diseases .....	4
Miscellaneous:	
Ophthalmologic diseases .....	4
Dermatologic diseases .....	1
Infections .....	3
Blood dyscrasias .....	1
Drug addiction .....	1

The general treatment program began with hospitalization. A complete history and physical and neurological examinations were made on each patient. In some cases, medical

consultants were asked to evaluate the organic disease and carry through necessary treatment.

Curare convulsive treatment was begun as soon as possible. Curare dosage in these older patients to produce complete curarization averaged more than 1 mg. per kilo, as compared with younger patients. The number and spacing of treatments were adapted to the individual case; the minimum was 3, the maximum 14. The average number of treatments in any one course was 6.5.

During the course of shock therapy and frequently throughout the whole course of hospitalization nutritional intake was stimulated by means of 20 units of insulin daily before breakfast. In all cases nutrition was rigidly supervised and good weight gains usually occurred. Patients were required to take part in occupational and recreational therapy except when mental confusion was severe.

Within 2 to 3 days after the course of shock therapy was completed psychotherapy and re-education were begun. Although memory defects were frequently still prominent, gross confusion had usually cleared. In senile patients confusion develops readily after a few treatments. The proper spacing of treatments requires close observation to avoid marked confusion. It is felt that the development of insight is important in preventing relapses.

Length of hospitalization varied, being more prolonged in those patients who required preliminary treatment for organic disease before shock therapy. One patient remained 86 days, although he received only 6 curare electroshock treatments. The shortest hospital stay was that of a relatively healthy 74-year-old male who remained 4 days for various examinations and then took treatment as an outpatient. It should be emphasized here that only patients who had previously been hospitalized and who had suffered a relapse or recurrence were treated as outpatients. Of the total group, only 4 patients were thus treated. The average length of hospitalization for the whole group was 39 days.

Duration of psychological disease did not apparently affect the duration of hospitalization. One patient who had been depressed

for 5 years was hospitalized for 42 days, received 4 curare electroshock treatments and made a sustained recovery. The duration of illness ranged from 1 month to 20 years. Of the 30 patients, 13 had been ill for over a year, 17 for less than a year.

Follow-up studies have been evaluated in the charts in Table IV. The elapsed time

short time after treatment and their discouraged families institutionalized both patients. The sixth patient was placed in the failure group since she could not be retreated after a relapse, because of severe cardiac decompensation.

#### CASE HISTORIES

1. *Sustained Recovery*.—B. O., female, age 73, was admitted with a history of severe depression, insomnia and nihilistic delusions for the preceding 3 months. She was a true pioneer, having lived for many years in a sod house in the Nebraska sand hills. Her prepsychotic personality was of the cyclothymic type and this was her first psychotic episode. In view of the prepsychotic personality type, the lack of rigidity and the absence of senile signs, a diagnosis of manic-depressive psychosis, depressed phase, was made. Physically she was diagnosed as having kyphosis of the thoracic spine, arthritis, hypertrophic type, generalized arteriosclerosis, hypertension and arteriosclerotic heart disease, grade I. She was given 7 curare electroshock treatments. She remained in the hospital 43 days and made a recovery sustained for 3 years. A recent letter from her states, "I am 76 now and to prove to you what I am I'll tell you what I do for pastime. I take care of 300 hens, market their product, buy and haul home all the feed and other necessities. I drive my little Olds wherever I want to go. I go to K . . . quite often, a distance of 50 miles. . . ." This patient, of course, developed excellent insight.

2. *Social Recovery*.—A. C., female, age 73. This patient was admitted with a history of severe depression at the age of 51. Treated by an internist, she had recovered from the depression after one year but remained obsessional. Three months before admission a severe agitated depression developed. She had always been a very rigid person. In view of the rigid personality and the earlier involutional depression she was diagnosed as involutional depression, recurrent. Physically she was diagnosed as having hypertension. She was given 7 curare electroshock treatments, and thereafter only as she showed depressive symptoms, which recurred until after the thirteenth treatment. Psychotherapy procured a very limited insight. She was dismissed after 57 days of hospitalization, markedly improved. She was followed for several months, during which she gradually became obsessional but not depressed. She was considered a social recovery.

3. *Case of Recurrent Attacks*.—J. W., male, age 71. This patient was admitted with a history of periodic incapacitating depressions for 30 years, none of which had lasted more than a few months. However, this time he had been depressed a year and gradually became increasingly agitated and suicidal. Between depressions he was described as outgoing, with considerable drive, a successful

TABLE IV  
FOLLOW-UP STUDIES

	No. of patients
a. Immediate response to treatment:	
Improved . . . . .	28
Not improved . . . . .	1
Died . . . . .	1
b. Follow-up study (time lapse: 3 months to 6½ years):	
Sustained recoveries . . . . .	11
Social recoveries . . . . .	3
Recurrent attacks . . . . .	3
Failures . . . . .	6
Not heard from . . . . .	6
Deaths* (during treatment) . . . . .	1
Total . . . . .	30

\* Follow-up data showed that 4 patients later died mentally well, 3 mentally ill.

since completion of treatment ranges from 3 months to 6 years, 3 months.

Of the 28 patients who showed improvement (recovery) at the time of dismissal from the hospital, one-half (14) had relapses or recurrences. Altogether, this group of 14 patients had a grand total of 23 relapses or recurrences. The reason the relapse rate is so high is that 3 patients have had a total of 10 recurrences; probably true recurrences in that each patient has been well a year or more between attacks. Many recurrences can be cleared up with a small number of treatments if the patient is brought back promptly, as illustrated by Case 3. Of those patients who made sustained recoveries, 5 had only one course of treatment and 6 had relapses, were retreated and have remained well.

Six patients relapsed shortly after completion of treatment and since they did not return for further treatment were considered failures. In 3 of these cases insufficient treatment was judged a cause for relapse. In 2 cases further treatment was obtained elsewhere, but relapses occurred within a very

farmer and business man. He was therefore diagnosed as manic-depressive psychosis, depressed phase. Physical diagnoses were: immature cataract, O. L., generalized arteriosclerosis, hypertrophic arthritis, prostatic hypertrophy and hypertension. Hospitalized for 38 days, he received 7 convulsive shock treatments. He made a good recovery and returned home. Since then he has returned 5 times for treatment. He remains well for about a year, becomes depressed and returns within 2 to 3 weeks after onset of the depression. A survey of his record shows that in the past 5 years and 3 months he has received a total of 38 treatments and has been hospitalized a total of 5 months. Now 76, he has been otherwise well and able to carry on his affairs.

4. *Failure—Insufficient Treatment.*—G. L., male, age 75. This patient was admitted with a history of a mild agitated depression 10 years previous. He was treated by a psychiatrist and recovered in about 4 months. About one month before admission he again developed an agitated depression and became suicidal. He had always been extremely rigid. A diagnosis of agitated depression, involutional type, recurrent, was made. He was severely arteriosclerotic and suffered from peripheral vascular disease with intermittent claudication. He was given 9 curare electroshock treatments during 35 days of hospitalization. The family presented a considerable problem and the patient was dismissed as improved but without insight. He relapsed in less than 3 weeks and was considered a complete failure.

Eight patients have died. The patient who died during treatment was 71 years of age, had mild arteriosclerotic heart disease, but was making an excellent recovery from an agitated depression. She took 6 treatments without difficulty or complications and died during the seventh. Unfortunately an autopsy was not obtained. Four patients later died while mentally well. Two others dying of physical disease while mentally ill are included in the failures. One died at 76 while recovering from her third recurrence in 5 years.

## CONCLUSIONS

Experience with a group of 30 patients all past 70 shows that convulsive shock therapy is well tolerated by the aged.

Convulsive shock therapy in the aged can be made more safe if curare modification of the convulsion is utilized. The organic defects and diseases of old age are not necessarily contraindications for curare electroshock therapy.

Follow-up studies show that half of this group of patients obtained sustained recoveries or sufficient recovery to remain functional in society.

Evaluation and retreatment of relapses suggest that prompt treatment of recurrences will produce an early remission and prevent prolonged hospitalization.

No conclusions can be drawn regarding the death rate in this group.

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## ELECTROSHOCK THERAPY

### A SURVEY OF 200 CASES TREATED OVER A 1 TO 5 YEAR PERIOD IN A PRIVATE SANATORIUM<sup>1</sup>

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This report embodies the results obtained in the treatment of 200 private sanatorium patients followed over a five year period. The treatment given was electroshock, either alone or in combination with sub-coma doses of insulin. In all cases an adequate program of psychotherapy was instituted.

Two primary factors distinguish this group. First, as private patients they voluntarily submitted themselves to confinement and were able to terminate their treatment whenever they or their relatives decided; and secondly, as private patients, few could afford the expense of prolonged care and the loss of time from their occupations or homes.

The average sanatorium stay of the cases reported was 25 days, as compared with 90(1) or more days stay in public institutions for the care of mental diseases. Surprisingly the results obtained with the shorter duration compared more than favorably with the latter. The benefit to the patient and family consisted in the short absence from work or household duties, the retention of all citizenship and competency rights, and avoidance of being labeled as an inmate of an insane asylum.

This does not in any way reflect on the excellent care given to patients in the state institutions, but to the unfortunate antiquated laws that still govern the disposition of those legally designated as insane. Until adequate changes are made in these laws, the above conclusions remain valid and in many cases of prime importance.

The cases reported included 144 women and 56 men, representing all types of mental ills, with the exception of luetic or gross organic cerebral changes. The ages varied from 12 to 83 with a mean age of 42. The average number of electroshock treatments

was 8.5 per case, the shortest being 2 and the longest 41.

The acute depressed patient responded most quickly and the recovery rate of 81% was the highest of all groups. (By recovery is meant a complete remission, in which the patient is able to resume his or her normal place in society.) The average number of treatments was 7 per case with a hospitalization period of 21 days.

The acute schizophrenic, either of a paranoid or catatonic variety, responded well, although in this group it was found best to use a combined therapy of electroshock together with sub-coma doses of insulin. The average duration of confinement was 42 days with 68% showing good results. Shock treatments were primarily used to break down resistive or negativistic attitudes and to make the patient more accessible and cooperative.

Insulin treatment started with 20 units, increasing the dosage by 20 units each day until coma resulted. The dose was then reduced and timed so as to avoid deep coma. Treatment was given 6 days a week for 3 to 8 weeks, depending on the response of the patient. All the cases treated were of an acute nature and were seen relatively early in their sickness.

In 29 instances there were recurrences and treatment was again instituted. Most of these responded to a reinforcement course of shorter duration than in the first series. I cannot see that this is necessarily a failure in treatment. As medical men we do not feel that insulin therapy in the diabetic is at fault when a patient who responds well, suddenly relapses into coma and it is necessary to institute heroic life saving measures. Nor do we "throw in the sponge" when it is necessary to redigitalize a heart patient or start a new course of quinine in malaria. The essential, gratifying fact is that we now have an instrument available that in a rela-

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

tively short period can so alter the outlook of a depressed person that he can once again become a part of his family group. I have given 4 separate courses of electroshock to 5 patients and 3 to 12 patients during a five-year period. None of these patients showed any deterioration or undue suffering from the therapy but on the contrary they were the most grateful of the series. They were able to live 50 weeks of each year with their families, retaining their normal status. Isn't

## COMMENT

These cases have been under observation now for a period varying from 1 to 5 years. Letters and personal contacts with the former patients were used to determine their present mental status, the reaction to electroshock therapy as to individual benefit, and to ascertain whether or not they would feel free to recommend it to patients suffering from the same malady. The replies were most encouraging.

TABLE I  
ELECTRO-SHOCK THERAPY

200 Cases Treated over a 1 to 5 Year Period

Type cases treated	No. treated	Aver. No. hosp. days	No. recoveries	No. failures	% recoveries	No. recurrences
Depressions .....	161	21	131	30	81	..
Manic-depressives ....	49	..	44	5	89	..
Agitated depressions ..	64	..	58	6	84	..
Cerebral arterio. dep..	11	..	6	5	55	..
Reactive depressions ..	9	..	9	0	100	..
Anxiety neuroses ....	12	..	8	4	67	..
Involuntional melan. ...	9	..	6	3	67	..
Alcohol., depression ..	7	..	4	3	60	..
Schizophrenics, acute ...	39	42	26	13	67	..
Paranoid .....	24	..	..	..	..	..
Catatonic .....	15	..	..	..	..	..
Totals .....	200	25	157	43	78.5	29

Average age of patients treated..... 42  
Average No. of treatments..... 8.5  
No. of male patients treated..... 56  
No. of female patients treated..... 144

Presenting symptoms:  
Depressions ..... 74  
Agitation ..... 68  
Insomnia ..... 64  
Recurrences:  
First No. .... 12  
Second No. .... 12  
Third No. .... 5

this better than to break up a family group and place the patient in a state hospital? As psychiatrists we are not only treating the patient but the family as well.

*Preparation of Patient.*—All the patients were given from 1½ to 3 grains of nembutal one hour before treatment. In the acutely agitated cases, from 3 to 15 grains of sodium amytal was given intravenously just before or following the treatment. Intocostrip was used in muscular men and women and in the older patients. A simple headpiece(2) similar in appearance to a radio operator's was used. It was found invariably best to start with a strong convulsive dose rather than with a relatively small dose and then building up to larger doses. I have had no fatalities or serious accidents due to treatment.

There were many factors that were responsible for the evident goodwill and freedom of response to the questionnaire. First was the voluntary nature of the treatment procedure. Most patients were seen in several interviews at the office before confinement. A feeling of confidence and trust in the doctor was established. At the sanatorium informality prevailed and the patient immediately identified himself as a member of a family group. The number of treatment cases was limited to small groups so as to maintain this family relationship. Everything was done to have the patients mix with the others. A community of interest grew with each succeeding day and treatment, especially as each observed the sustained and continuous improvement in

each other. They felt that they were a part not only in their own improvement but in helping with the problems of others. They also saw in the problems of others, factors that were present in their own sickness and they subconsciously gained insight and understanding of the mechanism of their disturbance. They soon saw that they were not alone in their misery and that domestic, economic and involuntional situations have much in common between patients. The old association pathways were forgotten with shock therapy and new positive goals asserted themselves. During this period of two

was stressed. This was of utmost importance. First, it helped the patient to adjust to the change and stabilized the patient and family, knowing that someone in whom they both placed a great deal of trust was interested in their future; and it reassured the patient on many of the confused mental processes that shock therapy produces, such as memory losses, etc.

Intense psychotherapy was started in suitable cases. In others a follow-up was maintained for continued observation and reassurance and a sincere attempt was made to eradicate the factors instrumental in bringing about their emotional conflicts. A dietician saw all cases where there were any suggestive nutritional disturbances and made the necessary dietary corrections.

I have made no attempt to classify these patients when first seen, beyond noting the acute presenting symptoms. When depression and agitation predominate, I know that good results will be obtained from shock therapy. Psychiatric diagnosis can be attempted later, after proper study of the patients and when they are most accessible to psychotherapy. It is surprising how many mixed cases are seen and how often with an unbiased approach an early impression is altered. It is for this reason that a more flexible approach should prevail in the first few interviews and in treatment.

TABLE II

## ELECTRO-SHOCK THERAPY

Survey of 200 Patients Treated over a 1 to 5 Year Period

Response by patients to questionnaires.....1946

1. Present mental status?	
Recovered .....	161
Same or worse.....	39
2. Fear of treatments?	
No .....	155
Yes .....	45
3. Recommend treatments for others?	
Yes .....	176
No .....	24
4. Number of years since recovery?	
One year .....	35
Two years .....	39
Three years .....	33
Four years .....	26
Five years .....	24

weeks, visitation with relatives was discouraged—thus preventing any former associations to be reinforced.

No attempt at deep psychotherapy was made during active shock therapy. Reassurance and confidence in their future were the main themes. However, one very important phase was covered thoroughly. In practically every case the families were interviewed and made to see their responsibility in the production of the patient's illness. In many instances severe emotional conflicts were found in the relatives that could also be reached and corrected. Sociological factors whenever possible were changed and bettered.

When the patient was discharged, the family and patient were again seen and the necessity for follow-up therapy at the office

## SUMMARY AND CONCLUSIONS

The total approach to the treatment of the acute psychotic should embody not only the active phase of the treatment, with a complete physical and laboratory study, but a thorough study, of the patient in relationship to his environment. This necessitates an intimate understanding on the part of the physician of the personalities of the entire family group. A human yet scientific approach incorporates the philosophy and friendliness of the old family physician with the dynamic interpretation and understanding of modern psychiatry: a personalized service adaptable to the individual and his family instead of a detached impersonal attitude that is so prevalent in large institutions and that would become more so in so-called Socialized Medicine.

A five-year follow-up program on 200

cases which followed such a program has been studied and presented. The recovery rate under this procedure has been extremely high and has been maintained over a period of 1 to 5 years in 80% of the cases.

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## SUB-COMA INSULIN AND PENTOTHAL SODIUM AS AIDS TO PSYCHOTHERAPY<sup>1</sup>

H. G. STRATTON, M. D., TORONTO, ONT., G. E. HOBBS, M. D., AND  
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This paper deals with the results of 6 months' experience in treating chronic anxiety reactions on the wards of a military hospital. The question of adequate treatment of this type of case has always been difficult and the results often disappointing. The problem has recently been emphasized by the number of cases developing during the war. We are recording our results and conclusions because: (1) This chronic group forms an important proportion of the post-war disabilities; (2) It has been neglected from the point of view of treatment; (3) It fairly closely simulates the peacetime variety.

Practically all psychoneurotic reactions have a common basis of anxiety. We are all familiar with the subjective sensations which indicate that emergency physiological body changes are taking place. We recognize these changes as an excellent response for a short term crisis, but we are also aware that when some emotional situation causes persistence of these changes, a true disability may result. The anxiety-producing ideas in the cortex stimulate the sympathetic center in the hypothalamus and thus the peripheral autonomic system, giving rise to tachycardia, gastro-intestinal upset, insomnia, etc.

Psychotherapy, our chief remedy for this condition, may be aided by a symptomatic treatment such as sedation, and here insulin has proved most satisfactory. On the other hand, the cause of the underlying anxiety may be determined by direct questioning or by the use of pentothal. A logical conclusion would seem to be that a combination of the two aids should achieve the best results.

In reviewing recent literature, it appears that the use of pentothal has received adequate attention in America, whereas the use of sub-coma insulin in these conditions, although long used in England, has received little attention on this continent.

Visible anxiety was the primary criterion in the selection of our cases and in the main our ultimate object was to assist these men in achieving a rapid civilian readjustment.

### CLASSIFICATION OF TYPES

For purposes of classification the cases were roughly divided into 3 clinical types.

1. *Generalized or "Free Floating" Anxiety.*—In these cases tension, startle reaction, insomnia, etc.—in short the usual anxiety manifestation were the most prominent part of the picture. This group comprised three-quarters of the cases treated.

2. *Psychosomatic Conditions.*—Here the patient had centered his anxiety on an organ, part of the body or fear of a disease—such as syphilophobia. These somatic complaints were frequent, but predominated in only one-fifth of the total group. It is our experience that this type of patient does not respond particularly well to this form of treatment.

3. *Certain Types of Depression Associated with Marked Anxiety Features.*—These were usually battle casualties in which a guilt reaction had developed.

### SOURCES OF MATERIAL

Patients were of two main groups, viz: (1) overseas men; (2) home service.

In general the former had more acute symptoms, of shorter duration and were basically more stable types of personality. Their reaction to treatment was more prompt and incidence of complete recovery was higher.

### USUAL SIGNS AND SYMPTOMS ON ADMISSION

Complaints were fairly stereotyped and for practical purposes can be grouped without excluding any of importance. The severity and frequency of subjective symptoms and objective findings are shown respectively in Tables 1 and 2.

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.



*Adjustment Previous to Service.*—This feature is important, in that it gives an indication of the type of psychological material with which we are dealing. Here a comparison between overseas and home service men is interesting and significant. Only 35% of the overseas men have a history of instability in the family background, while it is present in 60% of the home service cases. Childhood neurotic tendencies are present in only 30% of the overseas men, but in 72% of the home service group. About 20% of the overseas men have not previously adjusted well to their occupations, while 32% of the home service men had failed in this respect. The home service men also had mul-

toms with the physician. He was given a simple explanation of the origin of the symptoms using Cannon's work on the physiology of fear as a working basis. The formation of the vicious cycle causing persistence of symptoms after removal of the original cause was explained, and the rôle of insulin in breaking this cycle was described.

A complete physical examination followed, and any heart-conscious men were reassured. Two or 3 days later a detailed personal history was taken, and here was the first of 2 places where pentothal was considered. If the man had true amnesia of a painful experience, this treatment was recommended. In any case the possibility and danger of repressing memories were explained, and the impossibility of forgetting was stressed. It was emphasized that he must accept any experience as something which had happened and was now past. He was also warned that when relaxed, perhaps when dropping off to sleep, parts of these experiences might come to mind, and it was explained that once the experience had been recalled in full it was not likely to recur.

Week-ends were used as testing periods. The patient was urged to go home and any difficulties encountered were discussed on his return. The enthusiasm of parents and friends over improvement was an aid to his realization of the progress.

TABLE 1

Type of symptom	Total	Severe	Moderate
Anxiety .....	57	43	14
Anorexia .....	42	16	26
Insomnia .....	37	13	24
Irritability .....	25	11	14
Terror dreams .....	23	11	12
Expressed aggression..	16	9	7

TABLE 2

Type of finding	Total	Severe	Moderate
Palmar sweat .....	47	24	23
Tremors .....	42	19	23
Flushing .....	37	16	21
Agitation .....	22	9	13
Stutter or stammer...	10	7	3
Nail biting .....	7	3	4

iple factors in family and personal background and gave evidence of increased symptoms under army conditions because of adjustment difficulties.

#### DURATION OF SYMPTOMS

Symptoms were present for periods varying from 6 months to 3 years. The greater chronicity in the home service group has already been noted.

#### TREATMENT

Our treatment was entirely voluntary but the short period involved and the enthusiasm of the men already being treated were enough to convince the new men that it was worth a trial. Once on the ward an outline of the treatment was given and the patient was encouraged to discuss his symp-

#### INSULIN TREATMENT

Insulin was used routinely in all cases, the number of treatments varying from 9 to 13. Treatment was started the day after admission and the initial dosage was 20 units, increasing 10 units a day depending on the reaction of the patient. It was not found necessary to go above 70 units in any case to obtain satisfactory improvement. No breakfast was allowed before treatment. Insulin was given at 7.00 a.m. by the nurse and treatment terminated at 10.00 a.m. by glucose drink and food.

During the treatment period the ward was kept as quiet as possible and was darkened sufficiently to promote relaxation but yet not enough to interfere with observation. At all times the patient was kept in bed and under supervision of trained personnel—a trained nurse on the ward and a physician

immediately available. Emergency equipment was always ready but with the dosage used it was needed only 3 times. A short conversation was held with each man at the termination of his treatment. Improvement was mentioned and any new subjective symptoms explained.

Afternoons were kept as interesting as possible with occupational therapy and group activities. This period was also used for psychotherapy.

Treatment was carried out only 5 days a week and Monday's dosage was not increased over that of the previous Friday. It was interesting to note that alcohol and benzedrene, even in small quantities, seemed to increase greatly the reaction to treatment the following day.

Throughout the treatment every effort was made to maintain a cheerful, confident atmosphere. Here the nurse played an important rôle and was therefore carefully chosen. The patients soon entered into the spirit of things and were a great help in building the morale of new arrivals. Twelve patients would appear to be the optimum number for one doctor, but with the turnover every 12 to 14 days, this was considered practical.

#### PENTOTHAL

The first indication for pentothal was mentioned during the taking of the complete history, namely when recall of points of history was impossible. The second was when, during treatment, a plateau of improvement was reached or progress was not up to expectation. It was given as soon as indicated, and on an afternoon following insulin treatment.

The usual procedure was followed, *i.e.*, 1 cc per minute given to the stage of mild euphoria. The patient was then taken through his experiences in detail. If this did not produce any new information, he was simply asked to recount his most frightening and worst experience. Frequently this revealed hitherto repressed material. Immediately after termination of the pentothal, the patient was asked to recount his experiences while fully conscious and, when necessary, key

ideas or names were supplied. In this way poorly organized material was systematized.

The results have proven to be beneficial in the majority of cases and in two instances severe stuttering disappeared on the termination of pentothal treatment.

#### PSYCHOTHERAPY

This, of course, was the actual treatment and the continual cheerful, confident atmosphere played an important part. From the daily short interview at the termination of treatment, the need for additional interviews was determined and usually alternate days proved to be sufficient. To help the patient realize his responsibility in the treatment, he was urged to request his own interviews and to discuss problems as they arose.

There were 3 longer periods; first on admission, second the complete history and third about 2 days before discharge. In the latter talk certain mental hygiene principles were outlined: (1) The absolute inability to forget was explained and the common sense and necessity of accepting events that have happened in the past, no matter how unpleasant they were to face, were pointed out. (2) Patients were reminded how to relax. (3) They were instructed on the advisability of regular habits and sufficient sleep. (4) They were given suggestions on using up excess energy in physical activity. (5) We stressed the necessity of meeting problems and difficulties as they arose, rather than avoiding them by developing a neurotic reaction. (6) This led to a discussion of future employment and the probability of restlessness developing in the readjustment to civilian life. (7) Hobbies and other methods of utilizing spare time were outlined.

Obviously 10 days treatment cannot completely cure a condition of 2 years' duration, but we believe the short term treatment minimizes dependency on the doctor and prevents hospitalitis. We pointed out how they contributed to their own cure with our suggestion and guidance, and indicated how they could continue to improve by using the facts they had learned. They were made to realize that their future was their own and that they alone were responsible for it.

## ESTIMATION OF RESULTS

For purposes of classification, the results of treatment have been divided into 4 groups:

(1) *Good*—disappearance of subjective complaints and objective signs, 38 cases (63%); (2) *Fair*—subjective complaints gone, but some evidence of slight tension such as occasional flushing or excess perspiration, 14 cases (23%); (3) *Mild*—diminution in subjective complaints and objective findings, 6 cases (10%); (4) *Poor*—no improvement, 2 cases (3%).

As expected, the incidence of complete recovery was much higher in the overseas group. In several cases of home service personnel, although superficial anxiety had been overcome there was a basic tendency toward neurotic symptoms and over-reaction to stress which would respond only to other and longer types of psychotherapy.

## SUMMARY AND CONCLUSIONS

1. The technique of combined sub-coma insulin and pentothal narcosis in the treat-

ment of 60 consecutive cases of prolonged anxiety was explained and the results analyzed.

2. Especially encouraging results have been obtained where the anxiety reaction has been superimposed upon a previously stable personality.

3. Although the superficial anxiety is usually all alleviated, if there have been long-standing emotional conflicts, more prolonged psychotherapy is usually necessary to influence them seriously.

4. Sub-coma insulin and pentothal should be looked upon as primarily supportive measures, but definitely serve to promote relaxation and to make the patient more receptive to psychotherapy.

5. It is felt that this form of treatment is practical in cases of prolonged anxiety reaction in civilian practice and is especially applicable to the treatment of this type of case on the wards of a general hospital.

## THERAPEUTIC PEDAGOGY

### A NEUROPSYCHIATRIC APPROACH IN SPECIAL EDUCATION<sup>1</sup>

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Special education can be defined as "a program of education adapted to the education of exceptional children" (Heck). According to Elise Martens, "the fundamental principle involved is that each child shall be educated in keeping with his capacities, limitations and interests, looking toward the happiest adjustment he can make in life and the most constructive he can bring to society."

The progress in the field of special education, since Itards' attempt, nearly 150 years ago, to teach an idiotic child the principles of understanding life and the habits necessary to adjust to society, has been tremendous. Yet every day brings new evidence of the need for special provisions for handicapped children in our school systems. Psychiatrists have been called upon to diagnose and recommend treatment programs in cases of behavior problem, psychopathic, and psychotic children. Neurologists have demonstrated interest in the problems of the epileptic, the palsied and in some instances the brain-injured child. Beyond the diagnosis and professional advice regarding specific therapeutic procedures in serious handicaps of exceptional children our profession has not entered the field of education proper.

One may state that this situation is correct. On the other hand, one should proudly recall that the early contributions in the field of special education came from physicians and psychiatrists. Itard was a physician for the deaf; his successor Seguin was a neurologist and psychiatrist. Samuel Gridley Howe, who did so much for the blind and the feeble-minded, was a physician; Decroly and Montessori were psychiatrists, and one could add the names of many more. Physicians and psychiatrists not only lent their knowledge to effect behavioral adjust-

ments within the school situation, but they contributed to academic training as well.

Let us consider for the moment the classroom situation. Any child experiences at least 8 years of schooling during which two main requirements are asked of him; first adjustment to and growth in a particular environment of social living, and second, acquisition to the extent of reasonable facility, of fundamental skills in the three R's. All other subjects are superstructures raised on these foundations or enlargements of these basic units.

Leading the mind to mastery of the academic skills rests with the teaching profession. However, in cases of physical handicap the teacher seeks assistance from other professions. The crippled child receives orthopedic care to improve the motor ability necessary for writing and other manual activities; the child who is deaf or hard of hearing receives a hearing aid to teach him the significance of communication by sound and language; the partially blind receives optic aides so that he can appropriate the instructional material. A large number of cerebral palsied and brain-injured retarded children need special aid to overcome the mental peculiarities which are the sequelae of brain lesion.

To cite an example, outstanding pathological symptoms in the general behavior of brain-injured children are hyperactivity, distractibility, disinhibition and restlessness. This drivenness is organic, does not yield to psychotherapeutic procedures, impedes the child's adjustment to the learning situation and obstructs his acquisition of the basic instruction. As an ultimate resort these children are referred to the attention of the psychiatrist. What can be done to alleviate the pathological behavior manifestation of these children?

If we establish a separate classroom, such as the one for brain-injured deficient children at the Wayne County Training School, and the one for cerebral palsied children in

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From the Wayne County Training School, Northville, Michigan, Medical Superintendent, Robert H. Haskell, M.D.

a public school—the Harvey Lowrey School in Dearborn—we can create a “therapeutic milieu” which is still a classroom and in which children can be taught in a group situation. Such a classroom is especially planned. All external distractions are either entirely removed or greatly diminished. No decorations are on the walls, the windows may be painted half-way to eliminate outside stimulation. The group is small (12 children is considered a maximum) and the room is very large so that each child can work at his own desk in not too close proximity to his schoolmate. Some children may work better when facing the wall, and in some instances the desk removed behind a hospital screen will give the child the necessary relief from external stimulation.

Within a few days the children recognize that all these changes are not a punishment procedure but part of a therapeutic environment. Their accomplishment increases, their interest in academic work is heightened, and since they now can learn, they are no longer the center of difficulties within the group. The more real knowledge and understanding of academic work the less prominent becomes the general disturbance of disinhibition. Comments regularly made by the children run like these: “I like it in this class because I can learn—I just couldn’t stand so many kids in the other class.” “May I sit behind the screen, I can work so much better.” “May I sit at the desk against the wall, I get more work done.” We must strongly emphasize that these arrangements do not produce withdrawal, autism or mannerisms because the brain-injured child, as any normal child, needs social contacts, enjoys group living, and returns to his group as soon as he feels himself no longer disturbed by the presence of other children. An academic success means much to these children who have had unpleasant experiences for one or many years before coming to this special class. All were considered difficult problems, “headaches” so to speak, for teachers and school administrators. Their lack of response to academic material, their disability in learning, was all the more puzzling since many of these children possessed a normal, or even above normal, intelligence.

More specific assistance can be given in the acquisition of academic learning by aiding the brain-injured child in the various fields of perceptual disturbances and in the motor field. Many of our devices, or, as the children call them, “gadgets” or “machines,” are constructed to demonstrate through actual manipulation the fundamental processes of counting, writing or reading. For example, a child has not learned to count. The ability to determine the number of units in a group has not been achieved, either by practice with dot configurations or by pointing to the objects. The neuropsychiatrist, knowing developmental neurology, advises the teacher to construct a small frame standing upright. From the upper edge of the frame hang blocks on strings. The child grasps each block in sequence, at the same time saying the number name. Within a day his incoherent and inaccurate counting has disappeared. With his physical grasping of the blocks, he has for the first time mentally grasped the relationship of isolated units combined in a series. From then on he progresses with more elaborate problems of counting. Was this a trick? No. Developmental neurology tells us that in the maturation of coordinated movements grasping an object is genetically earlier developed than pointing to an object.

Here is another example in which neuropsychiatric thinking has helped. It is known that abductive movements of the arm and hand are more easily coordinated and more forceful than adductive movements. By beginning the teaching of writing with letters which are formed only by abductive movements as, “m,” “n” or “r,” rather than the letters, “a,” “b” or “c,” many a child has learned within a few days the beginnings of writing after weeks of vain struggle and frustration.

A number of brain-injured children are left-handed due to the fact that a right hemiplegia occurs more often than a left hemiplegia, and slight residuals from such motor handicap are often unrecognized. A neurological examination reveals the diagnosis. The change from left-handedness to right-handedness, in most instances, improves the child’s reading disability and complete unresponsiveness to writing as well.

The following case history may illustrate our viewpoints:

Robert, a white boy, 10 years of age, was admitted to the training school because of severe misconduct attested to by parents, teachers and police department, and because of a serious learning disability. The diagnosis of brain-injury was established by the history of probable birth trauma, several accidents resulting in possible head injury, a positive neurological examination, and an abnormal electroencephalogram. This boy, previous to admission, had been examined by various psychologists, neurologists, and child guidance clinics because of his cruelty, his lack of discipline, his destructiveness in the community, his lack in learning all academic fundamentals, with particularly severe reading disability. Because of his intelligence quotient above 80, the teachers were especially puzzled. The diagnosis was psychopathy or social maladjustment resulting from unfavorable familial conditions; brain-injury was suggested as a possibility. The first few months in the training school gave ample proof of the correctness of all previous statements in regard to this boy's misbehavior and learning disability.

Our first examination revealed in addition to the facts already known, left-handedness, organic distractibility, erratic behavior on our tests specific for brain-injury. We suggested a special educational program according to our findings. After several months of attendance in the special class the behavior disturbances in school have all but disappeared, and his adjustment to group living in the cottage has markedly improved. He has learned as much as a normal child would accomplish in the same amount of time. We reported our findings to the administration as follows: "Robert has, according to history, certain experiences which may have caused brain-injury. The family history fits into this diagnosis—parents and siblings are of normal intelligence. Other factors corroborating our diagnosis are the positive neurological findings, abnormal electroencephalogram, and the results of our specific psychological tests. Against the diagnosis of brain-injury speak the statements by other physicians and psychologists who wish to explain the extreme misbehavior as a result of constitutional inferiority, psychopathy, and environmental familial influences. We cannot refute those statements because we feel that they are correct. The question, however, remains if there is an additional factor of brain-injury, and how much weight should be attributed to this factor. We have always maintained that brain-injury is only in rare cases the sole factor responsible for personality disturbances; however, we attribute to brain-injury more clinical valence than others do. We, therefore, feel that the present success in the academic situation is due to the diagnosis and the application of therapeutic pedagogy in a case of brain-injury."

To summarize our ideas on a neuropsychiatric approach in special education, we present the following points:

1. There are children in the group of ex-

ceptional children who need neuropsychiatric attention in the area of academic learning

2. Establishing a special classroom, the creation of a "therapeutic pedagogical milieu" within the school system may sometimes be necessary.

3. Therapeutic pedagogy is not a substitute for, or a replacement of, other methods or procedures in special education. Children who need therapeutic pedagogy spend a period of a few months to several years in this special academic unit. They receive the benefits of a reduced school curriculum and an intensified teaching schedule for acquisition of fundamental academic skills.

Just as physiotherapy is specialized training in motor activity, therapeutic pedagogy is additional specified training in the field of basic academic learning.

4. At this time therapeutic pedagogy has proved valuable in the academic training of brain-injured children of the following types: the cerebral palsied child, the mentally retarded child, the deaf child, and the child with behavior maladjustment. Its efficacy has been shown in the whole range of educable intelligence from subnormal to above normal

5. The neuropsychiatrist possesses the necessary knowledge and professional experience to assist teachers trained in the methods of therapeutic pedagogy in the solution of problems arising in educating these types of children.

We may lead the discussion a little further and ask why we stress the importance of academic learning in the group of exceptional children. If behavior adjustments could be achieved by lessening the burden of academic learning, would that not be preferable? We believe that a minimum proficiency in academic skills must be expected from everyone in our present-day civilization. This minimum requirement, however, should be achieved with the greatest ease and with least frustration.

Although our methods have helped only a relatively small group of the total group of exceptional children, we have indications that more intensive investigation and more research would enlarge this group by including many children of the so-called maladjusted, neurotic, or psychopathic type. We know that the same methods presented here

would not apply for such a larger group, but the philosophy underlying therapeutic pedagogy would remain the same. Ten years ago we defined therapeutic pedagogy in a book of the same title as follows:

Therapeutic pedagogy has as its goal the education of children who suffer from retardation or disturbances in their development. Therapeutic peda-

gogy is based on medical knowledge of the causes and treatment of physical and mental defects in childhood. Therapeutic pedagogy comprises all methods which have as their goal a rehabilitation and harmonious development of capacities and aptitudes, physical as well as mental, of children and adolescents, crippled, blind, deaf, feebleminded, and psychopathic, from the point of view of establishing the necessary social habits which society at large expects.

## COMMENT

### JOURNAL BIOLOGY

The first issue of THE AMERICAN JOURNAL OF INSANITY, "edited by the officers of the New York State Lunatic Asylum, Utica," is dated July 1844. It was the first psychiatric periodical in the English speaking world, and founded and initially financed by Amariah Brigham, the newly appointed superintendent at Utica, who provided most of the contents of the first few numbers. The JOURNAL was a thin octavo brochure, each number to contain 96 pages and to be published quarterly. The subscription price was one dollar a year.

It is of interest to note the contents of this first issue of the JOURNAL. It opens with a "Brief Notice of the New York State Lunatic Asylum at Utica," with an illustration of the building. During the first 18 months operation 433 patients were admitted, of whom 123 were discharged recovered. Referring to the earlier New York Hospital in New York City, opened in 1791, the editor quotes *The Medical Repository* for 1807 to the effect that "the Lunatic Asylum of New York does honor to the city in which it stands, and the country to which it belongs. *It is believed that the proper discipline can be established among the maniacs, without the use of the whip.*"

Next follows a scholarly 38-page article, "Insanity—Illustrated by Histories of Distinguished Men, and by the Writings of Poets and Novelists," ranging from Homer to Walter Scott. Such notable case histories as those of Tasso, Cowper, Cruden, George III. are discussed in some detail; and the psychiatry of Shakespeare is extensively reviewed. The writer suspects that Shakespeare may have made his observations in Bedlam Hospital, and he sides with those who believe that Hamlet's madness was real.

An early example of the psychotherapeutic letter is reproduced. Sir James Mackintosh wrote under date of Feb. 18, 1808, to a clergyman friend on the recovery of the latter from a mental illness. In many respects the letter sounds quite modern. It suggests mental hygiene and prophylactic

measures and is directed in particular to morale building. The letter concludes as follows: "May you, my dear friend, who have so much of the genius of Tasso and Cowper in future escape their misfortunes—the calamities incident to under sensibility, to grand enthusiasm, to sublime genius, and to intense exertion of intellect."

One section of the JOURNAL contains the abstracts of 10 interesting case histories, 2 of them of medico-legal import, doubtless representing patients at the Utica Asylum under Dr. Brigham's care.

He also makes a noteworthy comment on "Asylums Exclusively for the Incurable Insane." To correct the evils of the poor-houses and on grounds of economy certain individuals had proposed that "public asylums should be built on a cheap plan, solely for those supposed to be incurable." Brigham vigorously opposes this proposal and enumerates its disadvantages. Similar suggestions have been heard from time to time down to the present day and Brigham's comments are still pertinent. He feared that the establishments contemplated would be little better than the poor-houses they were intended to replace.

This first number closes with some statistics relative to the number of insane supported at public or private charge in the United States and certain European countries, together with data concerning the hospitals in the several states and a few brief notes and items of news. It is recorded that as of 1840 in 26 states, 3 territories (Florida, Wisconsin, Iowa) and the District of Columbia there were 17,457 hospitalized mental patients representing a total population of 17,069,453 (1 to 977).

Among the news items are mentioned the death at Leipsic of Heinroth at the age of 70, and the establishment by Baillarger, Cerise and Longet at Paris of a bimonthly journal, the *Annales Medico-psychologiques*.

From 1844 to 1894 the AMERICAN JOURNAL OF INSANITY was edited and published at the New York State Hospital at Utica and



was the property of that institution. In the semicentennial year the Association purchased the JOURNAL from the managers of the Utica State Hospital and it continued as the official organ of the Association, appearing four times a year.

The 50th annual meeting was memorable for the famous scolding administered to the membership by the guest speaker Weir Mitchell. It appears in full in the volume of *Proceedings* which was published separately. This volume contains a group of contributions surveying the achievements and personalities in psychiatry during the preceding 50 years.

At the 77th annual meeting in Boston in 1921, coincidentally with the name change whereby the American Medico-Psychological Association became the American Psychiatric Association, the JOURNAL was rechristened the AMERICAN JOURNAL OF PSYCHIATRY. At this time the Association which began its existence with the "Original Thirteen" founders has enrolled somewhat over 1000 members; and the JOURNAL, the first volume of which (1844-1845) numbered 386 pages, had grown in the 78th volume (1921-1922) to 725 pages.

The year 1921 was notable for the celebration of the 100th anniversary of the opening of Bloomingdale Hospital as a separate department of the New York Hospital, arranged by the superintendent Dr. William L. Russell. One of the distinguished speakers on this occasion was Dr. Lewellys F. Barker who gave an address on "The Importance of Psychiatry in General Medical Practice." Dr. Barker listed 8 reasons for the general practitioner's lack of interest in, or even aversion to, psychiatry. His address will repay re-reading (abstracted in the JOURNAL, July, 1921; published in full in "A Psychiatric Milestone," the official volume commemorating the centenary).

With volume 84 (1927-1928) the JOURNAL changed from a quarterly to a bimonthly publication. The editor, Dr. Edward N. Brush, in announcing the change and also the enlargement of the editorial staff, commented that his own connection with the JOURNAL had begun just 30 years previously. Dr. Brush had however participated in the

editorial work during an earlier 6-year period at Utica, and when he retired in 1931 his total of 40 years on the editorial board far exceeded that of any other member before or since.

The death of Kraepelin (1856-1926) called forth from Dr. Adolf Meyer in the April 1927 number, both a critical survey of Kraepelin's work and a generous tribute to the versatile genius of this great German psychiatrist whose last thoughts before death concerned the fortunes of his Forschungsanstalt in Munich. His appeal to the Rockefeller Foundation for support was granted.

When Dr. Brush retired from the editorial chair in 1931, he wrote as his valedictory in the May issue an excellent 10-page review of the history of the JOURNAL from its founding by Amariah Brigham, who died at the early age of 50, after only 5 years as editor.

Having first become associated with the JOURNAL in 1878, Dr. Brush's remarkable memory of psychiatric developments in America down through the years lent great interest and value to his recollections, and it was hoped that a series of historical articles might come from his pen. Unfortunately he survived as editor emeritus only 2 years.

Biographies, with portraits, of the 7 former editors by Richard H. Hutchings and William Rush Dunton, Jr., together with a survey by Dr. Dunton of the JOURNAL's first hundred years, recording the changing complexion of subject matter as new interests, discoveries and procedures demanded attention, will be found in the Centennial Anniversary Issue published in 1944.

With rapidly increasing membership of the Association during the third quarter of its first century, and an ever widening range of contributors, the bulk of the JOURNAL had correspondingly enlarged. The last volume edited by Dr. Brush (1930-31) had reached 1086 pages.

The annual volumes, when bound, had become unwieldy; the 1940-41 volume ran to 1520 pages, almost a 50 percent increase in 10 years. On this account, and looking forward to the time when it would be desirable to increase the frequency of issue, the present format was adopted in 1941, a change that has proved advantageous in many ways.

At the Council meeting in December 1946, authority was granted for placing the JOURNAL on a monthly basis, and for engaging an assistant in the editorial office. Through the kind cooperation of Mr. Davies a very capable and experienced editorial assistant was secured in the person of Miss Martha V. Lavell, who came on the staff early this year and has already taken over a considerable share of the editorial responsibilities which have inevitably mounted year by year.

With the staff thus reinforced the change-over to the monthly schedule will now be possible and will begin with the present volume. Circulation of this issue will reach 5,816, of which considerably more than one-fifth (1,293) are paid nonmember subscriptions. We trust the increased frequency of the JOURNAL's appearance will be welcome to its readers and that its usefulness will thereby be enhanced.

## NEWS AND NOTES

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THE 1947 SOCIAL WORK YEAR BOOK.—According to the 84 experts who have contributed to the 1947 Social Work Year Book, social services of various types are being greatly expanded in the United States. There has been marked growth in such fields as health, education, recreation, and, of course, services to veterans. The public has been shocked out of its former apathy toward mental hygiene problems, as a result of war experiences; and much-needed reforms in mental hospitals through the "overdue" activities of laymen's organizations may now be anticipated.

An awareness is growing of the necessity for making social services available to all people in all economic groups. There is widespread agitation for health security for all; family agencies are offering family counseling services on a fee basis; and experts equipped to give advice on personal and family problems are found on the staffs of schools, churches, business and industrial firms, and trade unions. More than one-third of American adults have been shown by a nation-wide poll to be interested in some type of adult education. American cities of all sizes are demonstrating an unprecedented interest in long-range planning for recreation. As local, state, and federal services expand, voluntary agencies can devote more of their energies to pioneering and research, in such problems as alcoholism, for example.

In both voluntary and governmental agencies, the shortage of trained personnel is a major difficulty. Although between 1930 and 1940 the number of social workers in the United States increased 80%, there still remain 3 times as many professional positions in this field as there are qualified people to fill them. It is estimated also, that the nation needs perhaps 40,000 more public health nurses than it has now. In spite of the general program of expansion, no Year Book contributor finds the growth in service keeping pace with demand or need.

The Social Work Year Book, edited by Russell H. Kurtz, is published biennially by

the Russell Sage Foundation, 130 East 22d St., New York 10, N. Y.

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REPORT OF THE NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE.—To the citizens of New York State, Dr. Frederick MacCurdy, Commissioner of Mental Hygiene, has addressed a progress report, listing the achievements of the Department for the past year. He pointed out that more than one-fourth of the state's annual operating budget is dedicated to the care of the mentally ill and proceeded to inform the citizens how this money was spent.

In addition, he stressed the objectives of the Department of Mental Hygiene as follows: (1) more and better qualified professional and nonprofessional personnel for the institutions, outpatient clinics, and administrative offices; (2) in-service training programs for all phases of department activities, from top to bottom; (3) improved food service, with more appetizing and nutritious menus and more economical use of food-stuffs; (4) a stepped-up program of prevention, to head off some of the flow of admissions to the hospitals; and (5) expanded research activities.

Included in the report was a summary of proposed building projects and plans for medical and surgical centers at a number of the state institutions. The upward trend in the population of the 26 mental institutions under the jurisdiction of the Department of Mental Hygiene has accelerated during the past year. By March 31 of this year these institutions were caring for a total of 105,210 patients, an increase of 1,921 over the past year.

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NEW YORK INFIRMARY.—In connection with an expansion program to meet the growing needs of the New York Infirmary, it is pointed out that this was the first hospital founded by the first woman doctor in the United States, Dr. Elizabeth Blackwell. In the 94 years since its founding, the Infirmary has accumulated an impressive list of "first" occasions: the first training of

women doctors and women nurses in America; the first training of a Negro woman doctor; the first medical social service (which later became the Visiting Nurse Service); the first cancer prevention clinic anywhere in the world. The New York Infirmary is proposing to construct a new building, to cost 5 million dollars and to be located between 62d and 63d Streets at York Avenue, New York City. The hospital will have 350 beds and facilities for the care of at least 25,000 patients a year. It will be an international center for women in medicine.

**OCCUPATIONAL INFORMATION ON PSYCHIATRY.**—A new 6-page leaflet entitled "Psychiatry," by Florence L. Rome, has just been issued by Occupational Index, Inc., New York University, New York 3, N. Y. This pamphlet presents information on the growth of psychiatry, future prospects, description of the work, qualifications and preparation necessary, methods of entrance and advancement, salary ranges, number and distribution of doctors already in the field, advantages and disadvantages encountered. Sources of further information and selected references for additional reading are included. Cost of the pamphlet is 25 cents. Also available at the same price are leaflets on the subjects of medical social work, medical secretary, and practical nursing.

**VETERANS ADMINISTRATION RESIDENCY IN PSYCHIATRY.**—The Veterans Administration Hospital in New Orleans, Louisiana, is offering a 2-year residency in neuropsychiatry. This includes work with all phases of psychoses and psychoneuroses as well as the usual types of neurological and neurosurgical cases commonly found in a 500-bed hospital. The hospital has recently been designated a neurosurgery center. The residency will include 6 weeks' graduate study at Tulane University School of Medicine in neuroanatomy and neurophysiology. For information write to the Chairman of the Dean's Committee, Tulane University, 1430 Tulane Avenue, New Orleans 13, Louisiana.

**WESTERN STATE PSYCHIATRIC INSTITUTE AND CLINIC.**—The second annual Coordinating Conference of the Western State Psychiatric Institute and Clinic was held in Pittsburgh, Penna., April 10-11, 1947. The theme of this year's conference was the place of psychiatry in general medicine. General objectives of the Coordinating Conference are to coordinate the concepts and services of psychiatry, psychiatric nursing, clinical psychology, and psychiatric social service; to bring together and to further the work of the professional personnel in these fields; and to encourage the mutual contributions of psychiatry and general medicine.

**GENERAL SEMANTICS SEMINAR.**—The Institute for General Semantics will conduct its fourth annual seminar and workshop at Lakeville, Conn., from August 16 to September 5, 1947. Count Korzybski, members of his staff, and visiting lecture-consultants will participate in the program. The course is intended chiefly for those actively interested in the new methods of evaluation and their application to various fields of interest and work, including general and professional education, anthropology, psychiatry, mental hygiene, psychosomatic medicine, group work in rehabilitation, and general human relations.

The number of registrants will be limited to 50; applicants are expected to have some knowledge of the literature of general semantics. Registration fee is \$50, which is credited to the \$150 tuition charge. One full and five partial scholarships for the course will be granted by the Institute. For information concerning the 1947 seminar, write to Hansell Baugh, Registrar, Institute for General Semantics, Lakeville, Conn.

**CORRECTIONS TO MARCH ISSUE.**—From our list of the psychiatric resources of New York City, we regret that the Manhattan State Hospital was inadvertently omitted and the Lafargue Clinic was erroneously stated to be in the Bronx instead of Manhattan, where it in fact is.

## BOOK REVIEWS

PERSONAL ADJUSTMENT. By *Knight Dunlap, Ph. D.*  
(New York and London, McGraw-Hill Book  
Company, Inc., 1946.)

Several years ago the reviewer was endeavouring to wade through some articles heavy with psychoanalytic terminology when he was fortunate enough to come across a small book with the arresting title: "Mysticism, Freudianism and Scientific Psychology" by an author then unknown to him by the name of Knight Dunlap. Recalling the reading of this book, the reviewer was prepared to read with pleasurable anticipation Professor Dunlap's recently published book on mental hygiene entitled "Personal Adjustment." He must confess, however, that he has been disappointed in some of the contents of this book, which consists of the lectures delivered by the author to his students in psychology at the University of California, modified and elaborated for the general reader.

In its 435 pages it purports to deal with such subjects as learning, studying, mental disorders, neurotic maladjustments, goals, readjustment, negative practice, sex, marital adjustment and maladjustment, care and training of infants and children, various minor maladjustments, and in a final chapter it presents a critique of psychoanalysis. All subjects are presented concisely and in very plain, though at times somewhat flippant, language. The author frequently expresses extremely categorical opinions on matters which to say the least are still considered highly controversial. Although not medically or psychiatrically trained, the author takes it upon himself to make frequent excathedra pronouncements on medical and psychiatric subjects. In so far as these refer to current psychiatric teaching and practice, they are neither up to date nor authentic.

An experienced psychiatrist is rather surprised to be told that "persons who do go insane do not recognize their symptoms and so do not worry about them." Another extraordinary statement is that "there is as yet no evidence that a person from a family in which there has been mental disorder is more apt to develop the disorder than one from a family in which the affliction has not yet appeared." The statement that "the cause of so-called color blindness appears to be a diet insufficient in animal proteins" does not accord with modern teaching.

The chapter on "mental disorders," in numerous places, illustrates the fallacy of a nonmedically trained psychologist giving his opinions on purely medical matters. What psychiatrist would talk of the "psychosis of tuberculosis," would consider the epileptic (untreated) as a safer driver of an automobile than a normal individual or would be willing to admit that a physician can do nothing for a case of idiopathic epilepsy? Multitudes of epilep-

tics, symptom-free as a result of medical treatment, disprove such a statement. What psychiatrist would agree that "psychiatrists are of little use except for persons afflicted with serious mental disorders"? It is intriguing, if untrue, to be told that a patient in a major epileptic seizure is not unconscious but only suffers from a restriction of the field of attention. To one who has even a modicum of Latin, the spelling "extrovert" instead of "extravert" is extremely annoying. Notwithstanding all the medical judgments expressed by the author, on page 170, he naively remarks that "the psychologist, of course, does not pose as an expert on physical medicine," when that is just exactly what he has been doing throughout the whole book. Psychasthenics do not have delusions, and delirium tremens is not synonymous with multiple neuritis. There is certainly little truth in the statement that "most neurotics are vegetarians and have been vegetarians for the greater part of their lives." Incidentally vegetarianism seems to be one of the bugbears of the author, for he attributes to it neuroses, color blindness, and stammering. Other bugbears or "complexes" (if one dare use such a term) which the author seems to possess are semantics, Gestalt psychology, medical specialists, "commercial" psychiatrists by which he means practicing as opposed to institutional psychiatrists, and above all public enemy number one, psychoanalysis.

Notwithstanding the above critical comments, this book contains some very valuable material. The author's method of negative practise for the purpose of breaking habits and combating maladjustments is undoubtedly of great pragmatic value. He discusses sex and its functions and manifestations in human life in very plain language such as can readily be understood by any average intelligent person. His discussion of marital adjustment and maladjustment is also eminently practical and should be of great prophylactic value to young people contemplating matrimony, which, incidentally, is what the author intended it to be. The reviewer agrees with the author's designation of alcoholism as a habit rather than a disease which it is just now the popular thing to call it. His differentiation of personal maladjustment from social maladjustment on the basis of whether one's habits are disadvantageous to oneself or to others is a common-sense one.

In summary the reviewer is of the opinion that if the two chapters on mental disorders had been omitted, the book would have presented a safe, sane, and scientific (as well as a common-sense) teaching on the subject of personal adjustment and maladjustment.

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THE TREATMENT OF BRONCHIAL ASTHMA. By Vincent J. Derbes and Hugo Tristram Engelhardt, with chapters by a panel of contributors; (Philadelphia: J. B. Lippincott, 1946.)

Conservative evidence gleaned from this book indicates that approximately 75% of patients with bronchial asthma obtain marked relief from their asthmatic symptoms by allergy directed therapy. There remains a large number of asthmatics in whose picture allergens cannot be demonstrated and an additional number who, though allergen sensitive, do not respond to allergy directed treatment. Additional factors then, unknown stimuli perhaps, must also play a part in the production of bronchial asthma.

The importance of a reflex mechanism is indicated by the success of afferent sympathetic block (clearly discussed in Dr. Ochsner's chapter on surgical treatment); and that higher centers are involved in this reflex is suggested by ability of anaesthetic agents, as rectal ether, to control severe asthma paroxysms. For these reasons and for clinical observations described in this book, the psychiatrist must keep informed of available knowledge of bronchial asthma.

This book is not an encyclopedic compendium of our available knowledge of bronchial asthma, but it offers a good discussion of the allergens involved, their occurrence, distribution, and importance; and it presents a clear description of methods of diagnosis and treatment including brief chapters on psychiatric, rhinolaryngologic and surgical aspects. In addition, the first section of the book, labeled "Orientation," furnishes good background material in chapters on history (Ralph H. Major), statistics (Dublin and Marks), anatomy and physiology (G. E. Burch), immunology (M. B. Cohen), climate and weather factors (C. A. Mills), pathology and predisposing factors (the authors). Unfortunately, as in many books with chapters by a panel of contributors, what the book gains in authority it loses in duplication and in spotty writing.

The psychogenic factors are evaluated by Thomas M. French, clearly and concisely. He suggests that "psychologic factors may be effective either alone or by lowering the . . . threshold of sensitivity to substances . . . in the physical environment." Whatever the mechanism, psychodynamic studies reveal a common "undercurrent" in asthmatic patients, "a fear of loss of love and support of the mother" or mother substitute. With this background, possibility of brief psychotherapy exists, for "if the patient can confess the impulses that are at the moment responsible for his fear of estrangement from the mother substitute, then we may expect relief from his asthma attacks."

Certainly this book offers to the psychiatrist clinical and theoretical material essential for his understanding of bronchial asthma.

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SEX PROBLEMS OF THE RETURNED VETERAN. By Howard Kitching, M.D. (New York: Emerson Books Inc.)

This little book is a simple, nontechnical, rather idealistic discussion of marital adjustment and of the hazards inherent in prolonged separation, particularly the separation incident on overseas' service. It is not a description of serious aberrations, for, as the author states, the comments refer "primarily to good marriages." The problems, raised by separation, seem to be considerably less complicated than most of those which have come to our attention; so much so, that the title seems to be almost a misnomer.

The reader who seeks detailed or specific information as to the etiology, nature, or treatment of the sex problems of the returned veteran may be disappointed in this volume. He may feel also that much of what is said has been said too late, although it could have been of value, at an earlier date, in providing the soldier with some basis for the reasonable management of his sexual conduct.

Whether or not the book justifies its title it is a wholesome presentation written with an air of understanding and kindness which is therapeutic in itself. It may serve the veteran and his wife by indicating the background of their present distress and by presenting a basis for readjustment. It contains many excellent comments and principles which can be applied to marriages in general. The clinician will not read it without wishing that married people could accept its viewpoint more wholeheartedly.

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BLACK ANGER. By Wulf Sachs. (Boston: Little, Brown and Company, 1947.)

Written by a South African psychoanalyst, this book is the biography of an African medicine man belonging to the Manika tribe of Southern Rhodesia.

"I carried out my studies of him chiefly by the classical method of free associations. He came every day for an hour at a time, lay down on the sofa, and was asked to say whatever came into his mind. Contrary to the usual analytical practice, I wrote down whatever he said in his actual phrases and in their actual sequences. . . . These talks lasted, with a few interruptions, over a period of two and a half years."

However, the work does not present a deep psychoanalysis such as one might expect from such a procedure, nor is it an autobiography like those which some anthropologists have prepared. It is simply a readable life history narrated by a sympathetic listener. As such, it gives a useful account of some of the medical and supernatural beliefs of an atypical medicine man and his reactions to the social and cultural conflict between African and West European which confront the natives.

I did not have at my disposal for comparison a copy of his earlier book *Black Hamlet*, published in London during 1937. But from what I recall of that volume the present work seems to be essentially the earlier book with an added part at the end to bring the story up to date.

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THE VEGETATIVE SYSTEM, ITS STRUCTURE AND FUNCTION. *Markelow, J.* (Odessa, U.S.S.R.) (Vrachebnoe Delo, 25(11-12): 511, 1945.)

Markelow states that the vegetative nervous system was and is usually studied for its structural arrangements, its physiological reactions, and its pathologic conditions. It is generally assumed that all the functions of the vegetative system, whatever they may be, are related to the well-established morphology and function of the sympathetic and parasympathetic systems.

By a more thorough analysis one may see that the functional status of the vegetative system is regulated also by some endogenous factors such as the electrolytes and hormones. In his estimation these endogenous factors act as a "correlative regulatory system" which is called also the "endocrino-ioni-vegetative-complex."

The author, however, feels very strongly that in addition to the vitamins the "biologic organization" of the vegetative nervous system depends considerably upon exogenous factors such as "bioclimatic conditions." Furthermore, the whole human biology, as well as that of other animals, is influenced by environmental meteorism. Therefore a large number of "meteo-biologic factors" have a fundamental importance in the development as well as organization of the vegetative functions, and only through their effects upon the organism is the rôle of the endogenous factors conditioned.

Among the "meteorologic factors" the author emphasizes particularly the action of the sun rays or the so-called "photones." Through the eyes they exercise their direct action upon the vegetative centers of the hypothalamus and hypophysis, and in this way an entire group of energetic processes is created, the most important regulator of which is represented by the "optico-vegetative system."

In conclusion, the author feels that the whole functional complex of the vegetative system, as indicated by the above-mentioned data and the hypotheses of Krauss, Hess, Muller, Bissonette, Benoi, etc., is related to the neurones with the receptors and effectors of the organs, the hormones, the ions (electrolytes), the vitamins and the photones, including also the recently discovered "inductors" or "organizers" (particular substances which seem to play an important rôle in the process of morphogenesis). Consequently it would result that the normal trophic and regulatory functions of the vegetative nervous system may be assured only through the complete participation of these various

endogenous and exogenous components and their reciprocal correlation.

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PROGRESS IN NEUROLOGY AND PSYCHIATRY, AN ANNUAL REVIEW. Edited by *E. A. Spiegel, M. D.* (New York: Grune & Stratton, 1946.)

With the present volume Dr. Spiegel inaugurates an annual review of the most important contributions to neuropsychiatric progress appearing during the previous year, surveyed with critical comment by able authorities in the various branches of the specialty. The first volume covers material published from December, 1944, to December, 1945, together with a smattering of hitherto inaccessible literature which appeared in the immediately preceding years. Since European publications have only recently begun to reenter channels of normal distribution, the coverage is predominantly Anglo-American and Latin-American, with just a hint of the interesting and important work accomplished in France and Russia during the war years. Future volumes will no doubt incorporate such work and give a more global picture.

As it stands, this is a splendid example of scientific reporting. It is more specialized, integrated, and critically oriented than the usual year-books and abstract services in the field, and it supplies a real need in our reference sources. The bulk of the contributions are in the field of neurology in the modalities of neuroanatomy, neurophysiology, neuropathology, neurosurgery, clinical and diagnostic neurology, all treated by different authorities in a many-faceted approach. Because of the multiple authorship and overlapping of territory, there is some repetition of material, but this is kept to a minimum. The section on psychiatry proper is more fragmentary than that in the neurological field, but the most important trends in the clinical, psychodynamic, and therapeutic fields are representatively treated.

Bibliographies are well chosen and extensive, enhancing the value of the review for research men and clinicians alike, for those in and out of touch with the literature of the day, and perhaps especially for men preparing for the Board examinations.

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SEX, MARRIAGE AND FAMILY. By *Thurman Rice, M. D.* (Philadelphia: J. B. Lippincott Co., 1946.)

The search for a sound orientation to sex and marriage in modern society on an acceptably realistic yet idealistic plane, and in terms and concepts comprehensible to the laity, should eventually be crowned with success, judging from the earnest and many efforts by reputable authorities in the

medical field. Dr. Rice has done a very creditable job in the present book, despite his inclusion of such fatuities for chapter and topical headings as "Alone at Last," "The Return from Elysium," "Learning the Art of Love," etc. There is a great deal of constructive material, judiciously presented for younger people, in almost every important phase of the marriage relationship. The chapters devoted to problems of wartime marriage are timely and in good perspective.

Books in this field are usually either too highly flavored with the psychiatric viewpoint to make any sense to laymen, or else they are neglectful of it altogether. Dr. Rice's book lies rather in the latter category. It is nevertheless a very superior production in its genre, combining an effective common-sense approach with sound medicine and unimpeachable ethics.

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WHITE CAPS, THE STORY OF NURSING. By *Victor Robinson*. (Philadelphia: J. B. Lippincott Co., 1946.)

After reading this book, my first thought was, "How I envy anyone who can treat a subject so thoroughly and in so much detail and still hold the interest of the reader." The type and format have been well chosen, the illustrations are excellent, and the manner in which the story is told is certainly very pleasing. The following paragraph taken from the introduction is an example:

"Woman is an instinctive nurse, taught by Mother Nature. The nurse has always been a necessity, and thus lacked social status. In primitive times she was a slave, and in the civilized era a domestic. Overlooked in the plans of legislators, and forgotten in the curricula of pedagogues, she was left without protection and remained without education. She was not an artisan who could obtain the help of an hereditary guild; there was no Hanseatic League for nurses. Drawn from the nameless and numberless army of poverty, the nurse worked as a menial and obeyed as a servant. Denied the dignity of a trade, and devoid of professional ethics, she could not rise above the degradation of her environment. It never occurred to the Aristotles of the past that it would be safer for the public welfare if nurses were educated instead of lawyers. The untrained nurse is as old as the human race; the trained nurse is a recent discovery. The distinction between the two is a sharp commentary on the follies and prejudices of mankind."

All the different chapters are full of readable information, and a tremendous amount of research must have been necessary in order to bring so many facts together. The subject is considered from the roots to the blossom, and the pleasant and unpleasant are given equal standing.

The writer says that the history of nursing is but a part of the history of woman, and he goes on

to show how nursing has been one of the many avenues by which women have been emancipated. He describes in detail the origin of hospitals and follows closely the very gradual change from the untrained nurse of latter days to the well-educated professional of the present.

The chapters on Florence Nightingale, Clara Barton, and Edith Cavell are excellent and should be widely read. Nursing in wartime is well treated, and considerable space is given to the highlights of nursing care in all the great wars in which our country has been involved. The exploits of Dorothea Dix and Mother Bickerdyke are unusually well done and make very interesting reading. The chapter on notable nurses of America furnishes information concerning Linda Richards, Rose Hawthorne, and other famous nurses, all of whom contributed much to the gradual development of the profession. A summary called "The March of the Nurse" and several pages of bibliographical notes make it more valuable to students.

*White Caps* is an excellent contribution to American literature which should be read by all nurses, both young and old. It could be used either as a text or a reference book, and it would be a valuable addition to all libraries, whether public or professional, as it is also recommended to the lay reader.

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MOTOR DISORDERS IN NERVOUS DISEASES. By *Ernst Herz, M.D., and Tracy J. Putnam, M.D.* (King's Crown Press, 1946.)

The scope of this book is rather wider than its title might suggest. Though originally prepared as an illustrated syllabus for study in conjunction with teaching films, it is a useful text by itself. Essentially, it is another work on principles and method of neurological examination, excluding the mental and sensory aspects. The first 6 short chapters cover motor functions of the limbs and trunk including reflexes. The sections on abnormal movements and gait are rather too brief to be of useful teaching value without the related moving picture films. There is a quite lucid brief account of the difficult subject of apraxia. The section on reflexes is well illustrated. The last 8 chapters deal with cranial nerves. There are many reproduced and original drawings and photographs with helpful schematic considerations of such subjects as diplopia, facial palsy, and vestibular disorders. The reviewer would recommend this book as an accessory reference manual and atlas for students and teachers. Because of its limited scope it cannot be used as a standard text on neurological method for students, but the ample collection of drawings and photographs makes it a good addition to any neurological library.

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# THE AMERICAN JOURNAL OF PSYCHIATRY

## CLINICAL AND EEG INVESTIGATION OF PREFRONTAL LOBOTOMY PATIENTS<sup>1</sup>

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The increasing employment of prefrontal lobotomy in mental disease has afforded investigators a unique opportunity to explore the physiology of the frontal region and in recent years an imposing collection of data has accumulated. However, the development of psycho-surgery imposes an unusual responsibility on the psychiatrist who must make the grave decision of recommending this drastic and irreparable procedure. Consequently it is a professional imperative that this exigent problem be investigated through every possible approach. This study is an attempt to illuminate one segment of the prefrontal lobotomy problem—the psychiatric and electroencephalographic changes following operation.

Thirty prefrontal lobotomy patients on whom adequate data were available were studied, all of whom were operated on by Drs. W. Freeman and J. Watts, and were hospitalized at St. Elizabeths Hospital. Specifically excluded from this series were: (1) The patients operated on prior to 1938, since the surgical technique was altered at that time; (2) patients with less than 6 months post-operative follow-up period; (3) two operative deaths. Seven patients were operated on before admission here and most of the patients were lobotomized between April 1943 and June 1944. Their ages ranged from 21 to 71, and over half the cases were between 30 and 50 years of age. Only 9 patients had received shock treatment prior to operation and only 3 had a formal course of psychotherapy. Aside from the 7 patients who were operated on prior to admission all patients were selected for psycho-surgery by members of the hospital staff, the symptomatology of each patient being the primary consideration rather than the diagnostic category (see Table I). In general

most patients received the operation because: (1) They were destructive, homicidal, or suicidal—a serious threat to themselves and others; (2) They had been sick for several years and the prognosis was poor; (3) They had shown no improvement or had regressed; (4) They had not responded to other treat-

TABLE I

DIAGNOSIS OF 23 PATIENTS LOBOTOMIZED AFTER ADMISSION TO SAINT ELIZABETHS HOSPITAL

Dementia præcox	
Catatonic .....	3
Hebephrenic .....	2
Paranoid .....	2
Mixed .....	1
Undifferentiated .....	1
Manic-depressive	
Depressed .....	2
Manic .....	1
Mixed .....	1
Circular .....	1
Involutional melancholia .....	3
Psychosis with organic brain disease .....	1
Psychosis with cerebral arteriosclerosis .....	1
Undiagnosed psychosis .....	2
Psychoneurosis	
Obsessive, compulsive .....	1
Mixed .....	1

ment or were considered poor candidates for other therapy.

One patient (C. S.), psychotic for 8 years, developed active and progressive pulmonary tuberculosis with a positive sputum. He was extremely paranoid, aggressive, hyperactive, and pugnacious, constituting a serious ward problem because of his unrestrained spitting, severe weight loss, resistiveness to therapeutic attempts, and his refusal to eat or rest. Following the operation, although he was seclusive, preoccupied, and mute, he played chess, was tractable, ate and slept regularly, was responsive to the ward personnel, gained 37 pounds in 5 months, and his tuberculosis was arrested.

Another patient (W. P.) received a lobotomy because of severe lancinating pain due to tabetic crises that had plagued him for 10 years, effecting his complete demoralization with the result that he became addicted to morphine, was agitated and suicidal. For several weeks following the operation he suffered unpleasant dysesthesias in the same areas that were previously affected but these responded to aspirin and phenacetin, and after a few additional weeks, this medication was no longer

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From St. Elizabeths Hospital and George Washington University School of Medicine, Washington, D. C.

necessary. At present he is composed, suffers no pain, goes home for visits with his family, and, although he still has mild paresthesias, he states that they are scarcely noticeable and are of no moment to him.

Freeman and Watts(1) believe that this relief of intractable pain following lobotomy is due to interruption of the thalamo-frontal fibers. This effect was also noted in another patient in our series who was coincidentally relieved of tic douloureux following prefrontal lobotomy for her psychosis.

Fig. 1 shows the estimated duration of illness and hospitalization prior to operation, the average being 10.1 years for the former

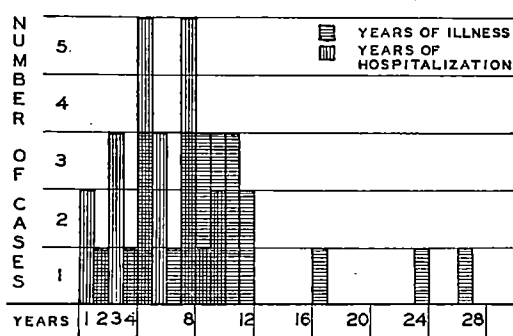


FIG. 1.

and 5.5 years for the latter, with standard deviations of 5.73 and 2.70 respectively.

*Postoperative Behavior.*—In the immediate post-operative period, these patients showed the various clinical phenomena described in detail by Freeman and Watts(1) including stupor, confusion, memory impairment, incontinence, and a tendency to perform rhythmic repetitive acts. Several months later their behavior showed a wider range of variation than would be expected from reviewing the literature on the subject, and the post-operative personality was often completely unlike the preoperative. For example, E. F., a depressed, agitated white woman with profound feelings of guilt and sinfulness, with strong suicidal drives, has become a boisterous, overactive, facetious, untidy extravert, completely uninhibited and oblivious to the sensitivities of her fellow patients. Conversely E. D., an impulsive, hyperactive, threatening manic, who regularly castigated the personnel with sulphurous invective, has become a retarded, docile, childish patient, who lives unobtrusively on a convalescent ward, quietly knitting and assisting with light tasks when requested.

In general, the results of this study confirm the impression that a better operative result can be predicted if the patient displays conspicuous affect, especially depression. The outlook is further improved if the patient has good intellectual and emotional resources. However, the operation often effects a drastic alteration in the personality and it is difficult to predict which facets of the personality will be changed. The technique of operation may influence this variable. Some patients are rendered obtunded in affect and intellectual function, are idle, subdued, lacking in initiative, and constricted in interests. Others are boisterous, windy extraverts, uninhibited, euphoric, and hyperactive. Almost all show loss of creative thinking and impairment of social consciousness. They are unable to plan or solve problems of any degree of complexity. There is a tendency toward indifference for the events of the future, and perseverance in even concrete tasks is limited. It is possible that some of these defects represent the irremedial consequences of a prolonged psychosis.

In about half of these cases there is decreased emotional play on their features; in a few, definite immobility of the facies, and the gamut of emotional expression, if not true affect itself, is narrowed. In 3 patients, the death of a loved one produced no evidence of grief and none of these patients has been observed to cry. On the other hand, one-third show overt behavior that suggests an inappropriate cheerfulness, a tendency to facetiousness, a low threshold to laughter, a kittenish playfulness and an insouciant disregard for the opinion and feelings of others. From observation of their overt reactions it is reasonable to infer that their affectual life has been significantly altered. However, it would be misleading to conclude that the patient's overt behavior necessarily reflects his true mood at all times. As in other mental states there may be considerable discrepancy between what the patient manifests and what he actually feels; for example, in the forced laughing and crying of pseudo-bulbar palsy and in the sham-rage of experimental animals. When the subjective state of the patient is investigated it is seen that the spectrum of emotional expression is narrowed and there is neither black despair nor transcendent ecstasy. The area of feeling has neither depth nor breadth and the ca-

capacity for a sustained mood is lost. It seems that the emotional tone of each engram is dissociated into weakly charged ideational units and complexes are thus dissolved. Consequently these patients are rendered less aggressive, more malleable, and better hospital or extra-mural citizens. In several who were desperately suicidal, the operation was truly a life-saving measure but a functional psychosis was traded for an organic syndrome.

As stated, the post-operative behavior patterns may differ profoundly from the pre-operative ones, and a lobotomized patient may resemble other lobotomized patients more than his own preoperative personality. It seems, however, that two general categories can encompass a large proportion of the post-operative behavior patterns:

1. The torpid, that is, those who show the previously described psychomotor and intellectual retardation, impoverished interests, reduced drive and "bleached affect."

2. The euphoric, that is, the silly, boisterous, uninhibited, overactive extravert.

Of course, many are mixtures of both and some show less socially reprehensible characteristics than others. No single trait was observed that completely characterizes the post-lobotomy patient, but the commonest feature is the tendency toward simplification of the reaction to the environment. For example, if the patient obtains a job it is usually much simpler, more stereotyped, less exacting, and on a lower intellectual plane than previously. If the housework is resumed, routine tasks are preferred, responsibility is avoided. The competitive events of life are not disconcerting to the patient and he is similarly insensitive to social censure. Observation of the mores is often reduced to a few simple principles that require a minimum of restraint and self-denial. The ethical code is simplified to a corresponding degree and childish lack of social conformity is common. This neglect of social values is often the principal reason for continued hospitalization after operation.

Psychopathic-like states are sometimes observed. Some post-operative patients show an ingratiating manner and excessive politeness alternating with childish petulance. There is also inability to persevere in a complicated task especially if it involves future returns or benefit. There is marked egocentricity, selfishness, indifference to the feel-

ings of others, distractibility, superficiality of affect and lack of self-control. None was guilty of any serious anti-social act or sexual delinquency. Several of the women reported diminished sex drive.

#### IMPROVEMENT FOLLOWING LOBOTOMY

Of the 23 patients lobotomized after admission to St. Elizabeths Hospital 21 benefited by the procedure. Eleven were considered social recoveries and of these 11, 9 were well enough to be discharged from the hospital. One patient was unimproved and one was made worse.

In interpreting the statistics of improvement of these 23 cases it is necessary to emphasize that this is not a random sample of patients with mental disease but represents chronically-ill hospitalized patients whose prognosis was considered poor, and whose violent behavior in about half the cases constituted a threat to themselves or to others.

In a series of 606 patients who survived this operation Ziegler(2) reported 85% benefited, and 68% much improved or recovered. Ziegler's data were accumulated from 19 different centers and include most of the psychiatric reaction types, with schizophrenic, involutional depression and obsessive neurotics predominating. Eight of these 606 patients were made worse, while other workers including Kindwall and Cleveland (3) and Hofstatter(4) emphasized that none in their individual series was made worse.

In January 1946 Freeman and Watts(5) reported a follow-up study on 331 cases, stating that about half of their patients were usefully occupied, one-quarter remained at home and one-quarter were dead or institutionalized.

The degree of improvement is variously estimated by different investigators and numerous factors must be considered in appraising these post-lobotomy changes; for example, the patient's social and economic opportunity, and his intellectual and emotional resources. The lapse of time after operation is also important and our series confirms Freeman's and Watts'(5) impression that some patients may continue to improve for as long as 3 years after the operation.

However, improvement is relative, and although a lobotomized patient is benefited by

the operation, and is a less difficult nursing problem, he still may be a "back ward" resident.

The post-lobotomy behavior level also depends upon the complexity of the patient's milieu and the amount of motivation offered him. A patient may remain inert and placid if left unstimulated by any challenge in his environment and, conversely, if presented with an insuperable or uninviting task, he may not be able to rise to the demand and will make no effort to attack or solve the problem, but lapses instead into mental and physical immobility. After operation, work suitable to the patient's changing resources must be given. Therapy does not begin and end with the lobotomy.

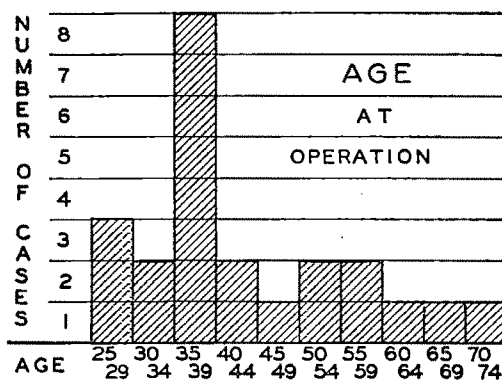


FIG. 2.

The age at operation (Fig. 2) shows no correlation with degree of improvement, nor does duration of illness and hospitalization (Fig. 1). In our series a prolonged illness did not militate against improvement. This is not necessarily in conflict with the observations of Freeman and Watts, that the earlier the operation is done, the better the results, since all our cases suffered prolonged illnesses and no comparisons were possible with patients lobotomized early in the course of their psychosis. Of course, the shorter the duration of the mental disease, the greater the likelihood of a spontaneous remission.

The 7 patients who had had lobotomies prior to admission are not included in the above statistics, since they represent the failures of an undetermined number of lobotomies and thus proper weight cannot be given them.

#### INTELLECTUAL CHANGES

In the intellectual sphere some authors have failed to find any loss of intelligence (6, 7, 8). In our series 9 patients were given the revised Stanford Binet test before and after operation but complete scatter was observed—3 showed an increase in mental age, 3 no significant change and 3 a decrease. The rest of the patients could not be tested pre-operatively because of their uncooperativeness or inaccessibility. Porteus (9) feels that the maze test is a more satisfactory measure of the patient's performance.

The inference that "intelligence" is unaffected by lobotomy is invalidated by the unreliability of "intelligence" tests applied to profoundly psychotic patients; therefore the increase in mental age observed in 3 of our patients does not mean that "intelligence" is improved by sectioning the frontal lobe but indicates that the patient is able to give a better performance on a specialized task because some obstructing ideational block has been removed.

The scores of the 4 tested patients who had post-operative convulsive seizures showed 1 higher, 1 unchanged, and 2 lower.

#### POST-OPERATIVE SEIZURES

In our total of 30 patients, 10 had post-operative seizures (Table II); 3 of these are seizure-free at present without any anti-convulsive therapy. The remainder have 2 or more attacks per year while on medication. Only one of the 10 has petit mal. This unusually high incidence of post-lobotomy seizures is at variance with the observation of other workers. Most investigators report from 0 to 10% of seizures following prefrontal lobotomy: for example, Freeman and Watts (5) report 10%; Bennett, Keegan and Wilbur (10) also report 10%; Kindwall and Cleveland (3) noted 1 in their series of 15; Ziegler (11) 1 in 17 surviving patients and Hofstatter (4) 1 in 45.

A satisfactory cause for this high rate of post-operative epilepsy in our series has not been found, but several possible factors can be mentioned: (1) these patients being institutionalized may be under closer scrutiny than patients in other series; (2) later follow-up reports may show an increased number of seizures. [As noted in Table II

the attacks appeared from 3 to 25 months post-operatively.] (3) lipoidal, which is used to identify the area of section, remains *in situ* indefinitely and may produce sufficient local irritation to act as an epileptogenic factor; (4) dying cortical cells may effect an epileptic discharge; (5) 6 of the 10 convulsive patients had received shock therapy prior to operation, in contrast to only 3 in the remaining 20 patients who were seizure free. This suggests that the shock treatment may have lowered the threshold of convulsions, which was then exceeded following the

able that this more radical posterior section of the thalamo-frontal tract, with its increased propinquity to the motor area, would be more likely to produce seizures. Meyer and Beck(12), however, in their report on the autopsies of 9 lobotomized patients, state that the one patient who had post-operative epilepsy and died in status epilepticus had the surgical lesion farther away from the motor cortex than in any of the autopsied cases, and the prefrontal cortex was not more damaged than usual. These authors further state "so far, we have not found any ana-

TABLE II

## DATA ON TEN PATIENTS WITH POST-OPERATIVE CONVULSIONS

	Age at opera- tion	Onset of con- vulsions months post- opera- tively	Frequency of convulsions	Diagnosis	Result of lobotomy	Treatment prior to operation
F. D. ....	38	25	6 per year	D. P. catatonic	Improved	Metrazcl
E. D. ....	43	3	None in several years	Psychoneurosis	Improved	
E. Du ....	37	11	52 per year	M. D. circ.	Improved	
M. H. ....	36	6	3 per year	D. P. paranoid	Unimproved	
A. K. ....	54	9	3 per year	M. D. dep.	Soc. rec.	Insulin
M. J. ....	35	19	Only 1 recorded	M. D. mixed	Soc. rec.	Electric shock (2 x)
M. N. ....	36	15	6 per year	D. P. catatonic	Unimproved	Metrazcl
M. O. ....	21	15	8 per year	D. P. hebephrenic	Improved	Insulin
P. L. ....	53	4	2 per year	Psychoneurosis	Worse	Psychotherapy and electric shock
S. I. ....	45	18	1	Involuntal melancholia	Unimproved	

further cerebral trauma due to the lobotomy. Thus four times as many of the convulsive patients had received shock prior to operation but there are not enough cases to establish a reliable difference between this group and the non-convulsive group. Furthermore, the electroencephalographic findings do not indicate a significant difference in the shock and non-shock patients after lobotomy.

It is reasonable to expect that the more violent the patients the more likely they are to receive shock treatment, and by the same token, in those cases in which shock therapy is ineffective, there is greater likelihood that the more posterior transection of the frontal lobes will be used. For example, Freeman and Watts(5) state that a severe obsessive-compulsive neurosis of long duration may require incisions from 5 to 7 millimeters posterior to the conventional site of section and long-standing schizophrenia "requires the maximum operation." It seems reason-

tomical changes that would account for the epileptic convulsion."

Three of the convulsive patients in our series showed no psychiatric improvement after the operation and one was worse. This suggests a poorer result in the group of 10 convulsives than in the 20 nonconvulsive patients. However, further investigation of larger numbers is necessary before valid inferences can be drawn. It can be definitely stated, however, that periodic convulsions do not have a beneficial effect by inadvertently giving the patient a "maintenance dose" of convulsive therapy.

A complete neurological examination of all 30 patients failed to reveal any neurological effect of the lobotomy, and none showed the post-operative vasomotor phenomena reported by Ziegler(11).

One patient had diurnal frequency of urination which did not respond to any form of treatment.

## ELECTROENCEPHALOGRAPHIC FINDINGS

Electroencephalographic tracings were made on 24 patients, 6 months to 8 years after operation, with a three channel Grass ink-writing instrument. A routine 8-lead monopolar recording was first made with tracings obtained from the frontal, precentral, temporal and occipital areas, with 3 minutes hyperventilation at the end of the record. Following this, bipolar and triangulation technique was employed, with 4 additional electrodes placed at a 3 cm. distance surrounding the operative scar.

Twenty-three of the 24 records showed definite abnormalities bilaterally over the frontal region.

Twenty-one showed high voltage 3 to 7 per second delta waves over the frontal region bilaterally and 2 had delta activity extending to the precentral area. With bi-polar recordings, phase reversal phenomena were observed over the 4 frontal leads, but no evidence of focal discharge was recorded posterior to this area in these 21 cases.

Fourteen showed a marked increase in amplitude and slowing with hyperventilation. Possibly this effect with hyperventilation is due to decreased parasympathetic inhibition subsequent to hypothalamic dysfunction. Darrow *et al.* (13) sectioned the parasympathetic nerves to the pial vessels of cats and obtained slowing and increased amplitude of the brain waves. They believe that these EEG changes were due to decreased cerebral circulation and lowered brain metabolism, following cortical vasoconstriction.

Only 9 of the 24 had normal alpha activity. The remainder of the records included 5 with a low-voltage, rapid irregular pattern and 10 with diffusely abnormal and disorganized tracings.

Table 3 summarizes our findings and Figs. 3, 4, 5, 6 and 7 are sample recordings.

These EEG abnormalities differ from the few reports in the literature on this subject. Davis (14) studied EEGs in 3 lobotomized cases and reported that the fundamental pattern was not altered in any, and in one case that showed 4 per second waves preoperatively there was marked improvement after the operation. Freeman (15) points out that the EEG varies considerably in different cases and at different periods

TABLE III

## ELECTROENCEPHALOGRAPHIC FINDINGS

	No. of records	Increase hyperv.	Seizure pattern
1. Well organized pattern, good alpha. No focal signs.	1	—	—
2. Well organized pattern, good alpha activity. Slow waves from the frontal lobes.	7	4	1
3. Well organized pattern, good alpha activity—6-per sec. disch. in all leads, more in frontals.	1	—	—
4. Diffusely abnormal records. Low voltage rapid irreg. activ. Poor and irreg. alpha. Slow waves in frontal area.	15	9	2
	24	13	3

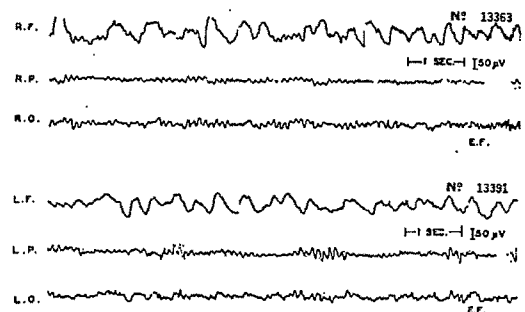


FIG. 3.—Prominent high voltage 2 to 3 per second slow waves, consistently recorded over the frontal areas. This slow activity is closely limited to the frontal region, bilaterally.

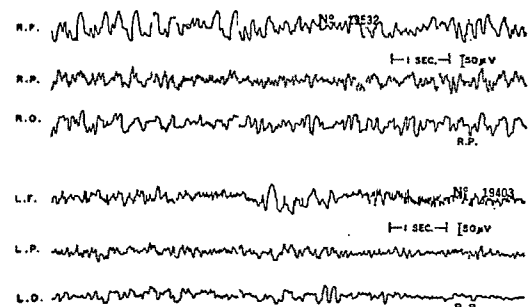


FIG. 4.—Diffusely abnormal record. Medium to high voltage 3 to 6 per second waves were simultaneously recorded in all leads. Note the preponderance of the discharges in the frontal areas. Irregular slow activity is also detected from the occipital region.

following the operation, "but in cases in which the recovery is satisfactory there is apt to be a normal wave pattern."

Hutton and Walter(16) found diffuse

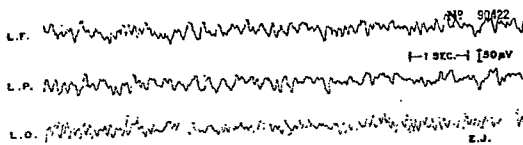


FIG. 5.—Diffusely abnormal record. Medium voltage 4 to 6 per second discharges are recorded from the frontal and parietal areas, bilaterally. The figure illustrates a recording of the left hemisphere.

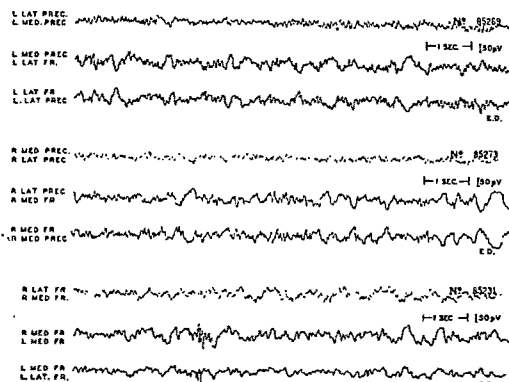


FIG. 6.—Bipolar recordings. Phase reversal focal signs over the left lateral frontal and right medial frontal regions.

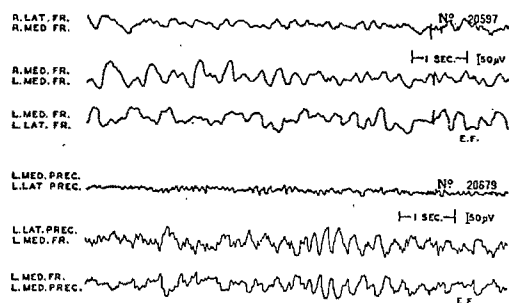


FIG. 7.—No. 20597—transagittal fronto-frontal recording with bipolar technique. Phase reversal and slow waves are consistently recorded over the frontal areas, being more marked in the medial parasagittal region.

No. 20679—Phase reversal focal signs over the left medial frontal area. In addition it can be noted 4 to 6 per second discharges, which appeared intermittently throughout the record, more marked in the anterior leads.

high-voltage slow waves that gradually improved and became more localized to the frontal region over a six-month follow-up period. Cohn(17) reported focal EEG changes more marked in the most rostral parasagittal leads. He states that in some

patients a relatively normal pattern returned in from 1 to 3 months post-operatively but also says that 10 out of 15 showed pronounced EEG abnormalities 4 to 6 years after lobotomy. There was only one post-operative convulsive disorder in his 30 cases.

As indicated, 23 of the 24 tracings in our series showed distinct abnormalities, but there was no correlation between post-operative behavior and the degree of electroencephalographic abnormality. Three EEG seizure patterns were observed, all occurring in patients with clinical epilepsy but 3 other patients with seizures did not show the typical convulsive pattern. Twenty-one of the 24 EEG tracings showed delta waves emanating from the frontal areas bilaterally, the cause of which may be found in any of the determinants already mentioned as possible etiological factors of post-operative epilepsy: focal damage to cortical cells, secondary progressive atrophy of the frontal cortex, irritation by the residual lipidol, etc.

Another possible explanation for the appearance of high-voltage, slow waves is the release of subcortical centers due to transection of the anterior thalamic peduncle. This theoretically would free the subcortical center from cortical domination, allowing these centers to display their characteristic EEG pattern. Grinker and Serota(18), employing animals and human subjects, demonstrated that high-voltage, slow waves emanate from the hypothalamic region, but their conclusions have been severely criticized by Masserman(19, 20, 21). Murphy(22, 23), using strychnine stimulation of the cortical and subcortical areas, has adduced further evidence to suggest that hypothalamic impulses attain a cortical destination by relay through the dorsomedial nucleus of the thalamus. It is this latter structure that Freeman emphasizes as the site of the most advanced atrophy following lobotomy.

Murphy's data further demonstrate that the hypothalamus may be the source of a basic brain rhythm, and indicate the possible existence of a hypothalamic-dorsomedial nucleus-cortex-reverberating circuit.

Of further interest in this connection is Hodge's(24) observation that theta waves (4-7 per second) appear in the EEG in cases of thalamic tumor when the cortex is cut off from the basal ganglia; in cases of children exhibiting aggressive behavior; and in cases of aggressive psychopathic states.

Grey Walter (25) considers that the appearance of this theta rhythm indicates disturbance of thalamic-hypothalamic function.

Thus, it is tempting to postulate that removal of cortical influence is the common cause for both the abnormal EEG pattern and the altered emotionality in the post-lobotomy patient. These changes in emotional response include both categories of Hughlings Jackson: (1) distortion of emotional expression, representing release phenomena; (2) modification of the conscious aspects of emotion representing deficiency phenomena. But further controlled investigations are necessary to confirm this hypothesis.

#### SUMMARY

1. A follow-up study of 30 cases of prefrontal lobotomy was done. Twenty-three of these patients were operated on after admission to St. Elizabeths Hospital after a prolonged incapacitating illness. Of these 23, 21 were benefited by the operation, 11 were considered social recoveries, and 9 were discharged from the hospital. An organic syndrome was substituted for the psychosis. Restitution of the patient's pre-psychotic state should not be expected. One patient was made worse.

2. Protracted illness did not militate against improvement in these selected cases.

3. The criteria employed for the selection of these cases for psycho-surgery are justified by the high percentage of patients that were benefited.

4. No objective neurological signs resulted from the operation.

5. Post-operative convulsions occurred in 10 out of 30 cases.

6. Electroencephalograms of 23 out of 24 cases showed definite abnormalities.

7. There is no correlation between EEG pattern and post-lobotomy improvement.

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## THE EFFECT OF BILATERAL FRONTAL LOBOTOMY UPON THE AUTONOMIC NERVOUS SYSTEM<sup>1</sup>

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Bilateral subcortical section of the frontal lobes of the brain was introduced in this country by Walter Freeman and James Watt, in 1936, for the treatment of serious mental conditions. In addition to its therapeutic success, this operation has contributed to the knowledge of the psychological and neuro-physiological functions of the frontal lobes. In the course of the many hundreds of operations, important clinical observations indicated the close relationship of the frontal lobes to the autonomic nervous system. Sudden fall in blood-pressure, relief from indigestion, palpitation and cold hands and feet, gastro-intestinal changes and decrease of the blood sugar level are some of the clinical observations which refer to the sympathetic and parasympathetic nervous systems.

This paper is concerned with a controlled experimental investigation of the effect of bilateral frontal lobotomy upon the human autonomic nervous system. No literature has been found on this subject, with the exception of a preliminary and inconclusive report by F. Reitman on "Autonomic Responses in Prefrontal Leucotomy," in the *Journal of Mental Science*, published in July, 1945, which came to our knowledge, in this country, after our experiments were well under way.

*Method of Investigation.*—A total of 96 patients were examined, of whom 29 had undergone operations, and 17 of these were examined both before and after lobotomy. The control group consisted of 66 individuals, 14 volunteer medical students and nurses and 52 hospital patients, a number of whom had received various forms of shock treatment. The *sympathetic or adrenergic system* was examined with 0.05 mg. of epi-

nephrine, in a 1 cc solution, injected intravenously over a period of 10 seconds. Blood-pressure, pulse-pressure, pulse rate and other adrenergic reactions were recorded. The *parasympathetic or cholinergic system* was examined by physical and pharmacological stimulation of the carotid sinus. Simultaneous electrocardiographic and electroencephalographic tracings were taken, and other clinical manifestations, such as convulsions, were recorded.

*Results.*—Following the intravenous injection of 0.05 mg. of epinephrine, in the control group, the systolic blood-pressure rose on the average of 42.0 mm. Hg. This rise of systolic blood-pressure was approximately the same in the same patients under the same conditions, over a number of consecutive days. The pulse-pressure rose; the pulse rate, in most instances, was moderately increased. In the group of patients who had undergone bilateral lobotomy, there was a great quantitative difference, though qualitatively the change was similar in character. The systolic blood-pressure rose to twice the level of the control group, that is, an average of 85.0 mm. Hg. in the lobotomy cases, as compared with 42 mm. Hg. in the control series. The average of the pulse-pressure rise was 60 mm. Hg., as compared to 24 mm. Hg. in the control group. A comparison of the blood-pressure diagrams of the same patients, before and after lobotomy, strikingly illustrates this observation. Pilo-motor reactions and shivering are frequently seen in lobotomized cases after injection of epinephrine, and not in the control cases. The blood-pressure response to epinephrine, following lobotomy, is about equal to the blood-pressure response in controls after full vagal blocking with atropin.

The *parasympathetic or cholinergic system* was examined by the stimulation of the carotid sinus. We selected this method be-

<sup>1</sup> Abstract of a paper read by title at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

cause of the low incidence of positive carotid sinus reactions in normal people. The response to carotid sinus stimulation was dramatic in patients whose frontal lobes were sectioned bilaterally. Three groups of reactions were observed:

1. *Slowing of the heart.* This occurred in 84% and was characterized by an increase of the QRS-QRS interval, which was moderate in 44%, and excessive to the extent of heart-block, in 45%.

2. The EEG, in 92%, changed from a basic pattern to a highly abnormal pattern. Following the slowing of the heart, high voltage slow waves, of the 9-5 per second range of frequency were recorded.

3. *Loss of consciousness* and tonic-clonic convulsions occurred in 88%, following, in one or two seconds, the appearance of slow waves in the EEG, and lasted from a few seconds up to one minute or over.

In great contrast, are the results in a group of 8 controls, in which, by history and examination, no mental or physical abnormalities could be detected. In only 3 of this group, the EKG recorded a slight, hardly visible, slowing of the heart rate, and in only 2, a few slow waves in the 5-8 per second range appeared in the EEG. None developed syncope or convulsions.

Quite different, however, was the result in a group of 40 hospital patients with various mental diseases and previous insulin, metrazol or electric shock treatment. In this group, carotid sinus stimulation caused abnormalities in the EKG in 63%, of which 40% were characterized by slight to moderately increased QRS-QRS intervals, and 22.5% by still greater slowing of the heart rate to heartblock. The EEG, in 50%, disclosed high voltage slow waves in the 2-5 per second range. Tonic-clonic convulsions were observed in 42%.

There is no doubt that the mental condition, and particularly previous shock treatment, exerted a tremendous influence upon the effect of the carotid sinus stimulation. The incidence of carotid sinus reaction is considered higher in patients with mental disorders. It is further increased if a patient has received shock treatment of any kind. Our data showed that the effect of carotid sinus stimulation in patients with previous shock treatment was similar to that of those, without previous shock treatment, whose frontal lobes were sectioned. On the other hand, the combination of shock treatment and lobotomy brought up the effect of carotid sinus stimulation to almost 100%, as well as for the EKG, the EEG, and convulsions.

It was interesting to note that atropin and benzedrine sulfate, if given in sufficient amounts, seemed to abolish the carotid sinus reflex, while acetyl-beta-methyl choline seemed to enhance it.

*Summary.*—1. Cortical representations of the autonomic nervous system are located in the prefrontal area.

2. Following the subcortical section of the frontal lobes, the autonomic nervous system becomes more responsive to stimuli from without.

3. Equilibrium reestablished itself on a different level.

4. With the disconnection of the frontal lobe, excitatory and inhibitory influences upon the A. N. S. are abolished, which may explain certain clinical observations such as the fall in blood-pressure in hypertensive patients.

5. Frontal lobotomy which, at present, is performed for the surgical treatment of serious mental illnesses, may, in the future, become a method for the treatment of selected cases of hypertension.

# THE EFFECTS OF ELECTRIC CONVULSIVE THERAPY ON CERTAIN PERSONALITY TRAITS IN PSYCHIATRIC PATIENTS

B. L. PACELLA,<sup>1</sup> Z. PIOTROWSKI, N. D. C. LEWIS

Investigations to determine the effect of electric shock treatment upon the personality structure of psychiatric patients have been previously published (1, 2, 3). The means utilized for detecting these changes have usually consisted of clinical observations and impressions. We considered it of interest to evaluate certain aspects of personality by relatively standardized and objective methods. For this purpose the Minnesota Multiphasic Personality Inventory and the Rorschach Test were utilized. The results were recorded graphically on standardized scoring sheets. Tests were taken both before and after shock treatment in patients diagnosed as psychoneurosis, schizophrenia, manic-depressive psychosis and involutional psychosis. Only those cases who received a minimum of 4 treatments were included in the study; the maximum total number of treatments administered to any one case was 20. The usual course of shock therapy consisted of a series of 6-12 electric convulsive treatments given at the rate of three times weekly. A total of 75 patients was studied, 40 of whom were classified schizophrenia; 24 manic-depressive and involutional psychosis; and 11 psychoneurosis.

All patients were subjected to the Minnesota test before and after treatment. In the majority of instances two post-treatment tests were performed, one taken during the first week after shock treatment and the second test taken from 4 to 8 weeks subsequent to termination of treatment. The reason for recording two post-therapy tests is that during the first post-therapy week the patient may be in a somewhat confused state, with varying degrees of memory disturbance and perhaps temporary disorientation. This "organic" confusion almost completely clears up in 3 to 4 weeks after the termination of treatment. It was, therefore, de-

sirable to compare the results of testing during the period of marked memory disturbance, and subsequently when this period of disturbance had abated. Occasionally, patients manifested temporary clinical improvement only during the immediate confusional period; in these instances, when symptoms of the illness returned, they were usually evident within 3-4 weeks after termination of therapy.

Rorschach tests were given to only twenty schizophrenic patients before and after electric shock therapy; the post-treatment Rorschach records were taken two to four weeks after termination of treatment.

The clinical responses to convulsive therapy were evaluated approximately 4 weeks after termination of therapy so that patients who showed remission of symptoms immediately after therapy and subsequently relapsed, were considered unimproved. Four categories of clinical response to the treatment were arbitrarily considered: 0—unimproved; 1—slight improvement, consisting chiefly in a lessening of anxiety or tension or depressive affect without change in delusional formations or neurotic somatic symptoms; 2—substantial remission of all symptoms, including affect components, delusions, hallucinations, and somatic symptoms; 3—complete recovery with disappearance of all affective, ideational, and somatic disturbances related to their illness.

## RESULTS

The observations made during the Minnesota Tests are shown in Table 1 and Graphs 1, 2, 3, and 4.

It may be noted that in the Minnesota test, 9 personality components are evaluated and scored. These include the following: Hs(hypochondriasis), D(depression), Hy(hysteria), Pt(psychopathic), Mf(homosexual trend), Pa(paranoid), Pt(psychasthenia), Sc(schizophrenia), Ma(mania).

The Minnesota test scores for each personality trait listed above should normally be below 70. Any scores above 70 are con-

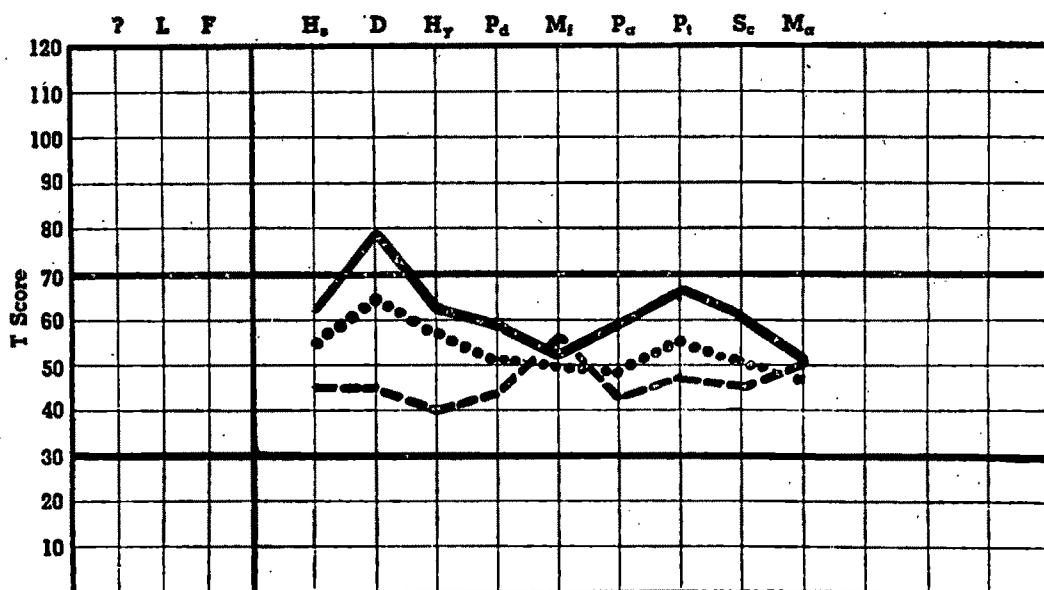
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Presented at the annual meeting of The American Psychiatric Association in Chicago, June 1946.

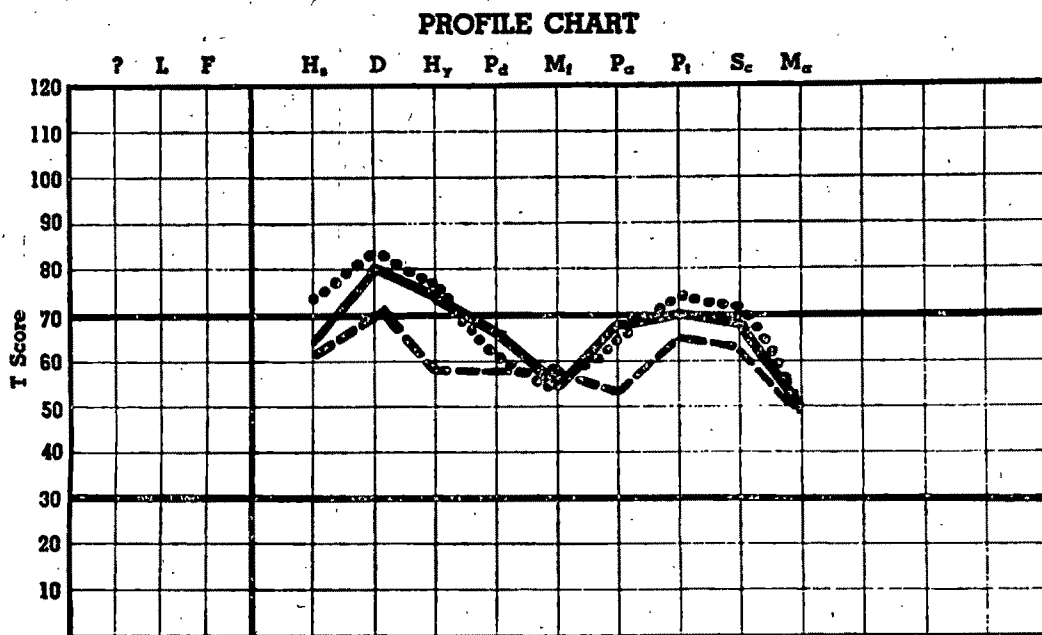
TABLE 1

	Test no.	AFFECTIVE DISORDERS		SCHIZOPHRENIA (IMPROVED)		SCHIZOPHRENIA (UNIMPROVED)		PSYCHONEUROSIS	
		24 CASES		22 CASES		18 CASES		11 CASES	
		Average Scores	Deviation	Average Scores	Deviation	Average Scores	Deviation	Average Scores	Deviation
Hs	1	63.00		60.14		62.11		64.55	
	2	45.82	-17.18	47.85	-12.29	73.20	+11.09	61.09	-3.46
	3	54.69	-8.31	28.50	-31.64	82.17	+20.06	72.93	+8.28
D	1	79.17		68.73		69.67		79.64	
	2	45.76	-33.41	50.90	-17.83	64.73	-4.94	69.27	-10.37
	3	65.92	-13.25	35.38	-33.35	89.83	+20.16	84.00	+4.36
Hy	1	63.29		60.82		63.39		73.64	
	2	40.35	-22.94	48.55	-12.27	59.07	-4.32	59.36	-14.28
	3	56.69	-6.60	42.38	-18.44	70.42	+7.03	75.33	+1.69
Pd	1	58.46		61.91		68.22		66.35	
	2	44.29	-14.17	48.15	-12.76	61.87	-6.35	58.64	-7.91
	3	50.69	-7.77	40.69	-21.22	76.17	+7.95	62.00	+4.55
Mf	1	52.88		56.00		55.50		54.82	
	2	53.94	+3.06	55.05	-.95	61.20	+5.70	56.55	+1.73
	3	50.23	-2.65	44.19	-11.81	68.17	+12.47	55.50	+1.68
Pa	1	57.75		58.64		60.44		58.82	
	2	43.47	-14.28	43.00	-15.64	52.80	-7.64	54.18	-4.64
	3	49.31	-8.44	37.94	-20.70	65.42	+4.98	66.50	+7.68
Pt	1	65.96		62.41		66.50		69.64	
	2	47.24	-18.72	47.80	-14.61	57.53	-8.97	65.36	-4.28
	3	55.92	-10.04	41.63	-20.78	77.92	+11.42	72.47	+3.03
Sc	1	61.38		65.27		70.33		68.27	
	2	45.65	-15.73	49.10	-16.17	55.67	-14.66	63.00	-5.27
	3	51.00	-10.38	43.44	-21.83	73.92	+3.59	70.83	+2.56
Ma	1	51.29		53.77		56.89		50.00	
	2	49.82	-1.47	50.00	-3.77	48.53	-8.36	48.82	-1.18
	3	46.54	-4.75	47.25	-6.52	52.25	-4.64	49.83	-.17

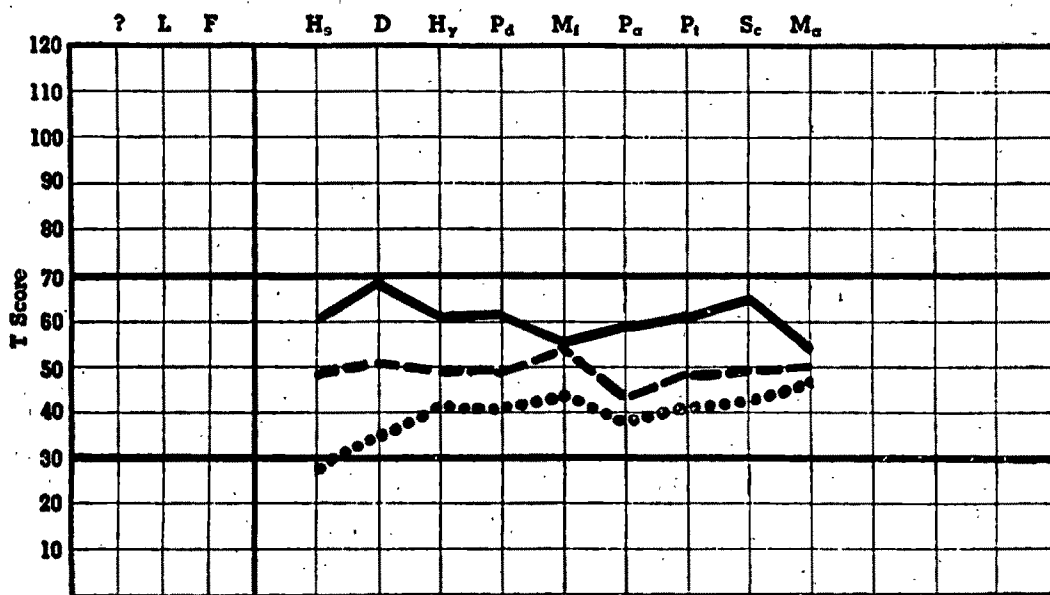
## PROFILE CHART



GRAPH 1.—The Minnesota Multiphasic Personality Inventory— affective disorders.



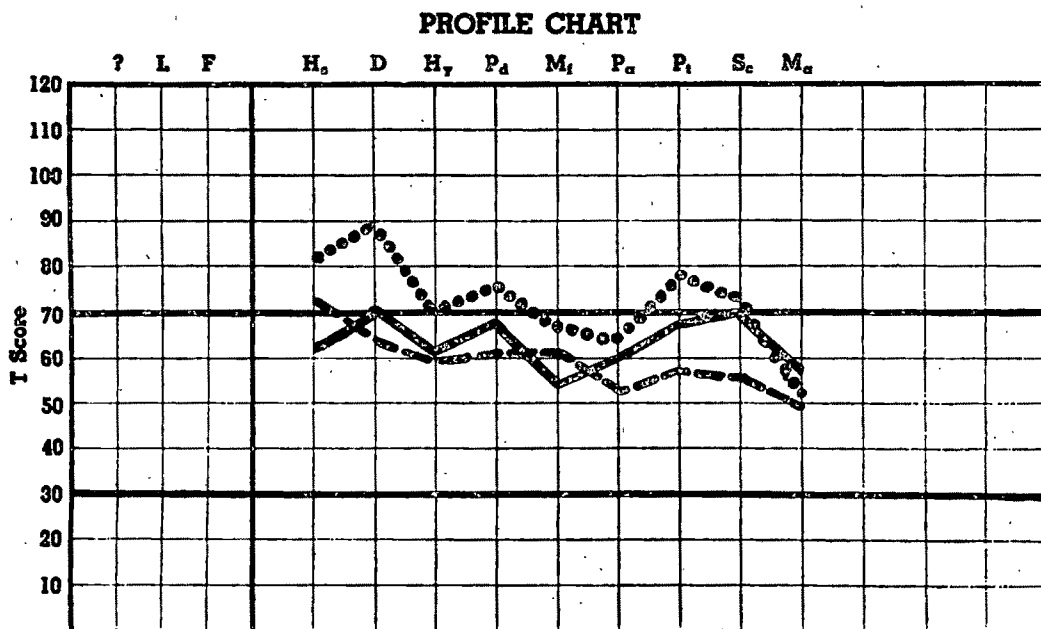
GRAPH 2.—The Minnesota Multiphasic Personality Inventory—psychoneurosis.



GRAPH 3.—The Minnesota Multiphasic Personality Inventory—schizophrenia (improved).

sidered to be an exaggerated degree of that particular personality component and therefore suggest morbidity. The component personality scores for all individuals in each diagnostic group were averaged and plotted on graphs, so that average curves were made for the manic-depressive and involutional group combined (affective disorders), the psychoneurotic group and the schizophrenic group. In the latter-mentioned, separate graphs were made for those who showed

quently showed scores above 70 not only in the D factor, but in other factors as well, particularly the Hs, Hy, and Pt factors. However, the graph reflects this, since the average scores for these personality components were between 60 and 70. Immediately following termination of shock treatment all scores became lowered upon retesting with the exception of Mf (homosexuality factor) which became slightly elevated, but still remained within the normal



GRAPH 4.—The Minnesota Multiphasic Personality Inventory—schizophrenia (unimproved).

grades 2 and 3 improvement on the one hand (there was no grade 4 improvement), and those who exhibited only grade 1 or no improvement on the other hand. In the psychoneurotic group all patients were averaged together since all were essentially unimproved except for one patient who showed a grade 2 response. In the affective group, since no patient remained entirely unimproved and the great majority showed substantial improvement (grades 2 or 3), all patients were averaged together. Graphs were made of all patients before and after treatment.

It may be observed that in the affective patients the average curve exceeded 70 in only one personality trait, namely in the depressive score. It should be remarked, however that individual graphs of patients fre-

quently showed scores above 70 not only in the D factor, but in other factors as well, particularly the Hs, Hy, and Pt factors. However, the graph reflects this, since the average scores for these personality components were between 60 and 70. Immediately following termination of shock treatment all scores became lowered upon retesting with the exception of Mf (homosexuality factor) which became slightly elevated, but still remained within the normal range. The greatest changes occurred in the D score, which showed an average deviation of 33.4 points downward, and the Hy score, which showed a deviation of approximately 23 points. Next most affected were the Pt and Hs values. Upon further retesting about 4 weeks after the end of therapy, the second post-treatment studies showed an upswing of almost all the scores, particularly the D, Hy, Hs and Pt scores. It may be noted that the Ma and Mf values remained relatively unchanged with the Mf showing a slightly downward trend, which was the reverse trend of the other scores. At this point, patients were regaining their memory, becoming fully aware of the fact that they had just gone through an emotional illness, and approaching their pre-psychotic level.

In the psychoneurotic group, it may be

noted that the pre-treatment depression score (D) was high, similar to that observed in the affective group of disorders; but in addition, the Hy score is above normal limits and the Pt score is at 70, the borderline top level. Immediately after treatment, the scores showed a general decrease, but not to the extent that was observed in the manic-depressive group. Although the depression score was originally even higher in the psychoneurotic group than in the affective disorders, it may be observed that electric treatment resulted in an average deviation of only 10 points for the psychoneurotic patients, as contrasted with a deviation of  $33\frac{1}{2}$  points for the affective group. In spite of the 10 point dip in the psychoneurotics of the D score immediately after shock treatment, it, nevertheless, did not go below 70. The interesting feature is that in the third test, 4-8 weeks after treatment, the average scores of the D, Hs, Hy, Pt and Sc components were all at a higher level than prevailed before the treatment. The Mf scores and the Ma scores, as in the manic-depressive group, showed very little change. However, the Mf score did show the "inverse reaction" which was evident in the affective group. It might be indicated here that all of the psychoneurotic patients with one exception exhibited only slight temporary improvement or no improvement in the immediate post-shock period. Later, however, at the time the second post-treatment tests were taken, many of these patients were exhibiting an increase in anxiety.

In the schizophrenics considered as improved it may be observed that the pre-shock test showed no average scores which exceeded 70. However, the two highest scores were in the D component (69) and the Sc component (65). Immediately after shock treatment, the average curve resembled in form the curve noted in the M-D patients with the important exception that the percentage of variation in scores between pre-treatment figures and the first post-treatment averages was not as great. Of interest is the fact that the Mf score and the Ma score remained about the same. Very significantly, the final test scores showed a substantial further decrease, particularly in the Hs and the D components. This third curve

is a marked deviation from that observed in the manic-depressive patients, where the final scores all showed elevation (except Mf) particularly in the D component.

The unimproved schizophrenic group yielded a pre-treatment curve which was not remarkably different from that noted in the pre-treatment schizophrenics who improved. The two highest figures were in the Sc and D components, at a level of 70, with the Pd and Pt closely following at averages of approximately 68 and 67 respectively. Immediately after shock therapy the curve showed some lowering of all scores with the exception of the Hs score, which exceeded 70, and the Mf score, which moved upward slightly. The very significant observation, however, was that the second post-treatment scores completely reversed the trend noted in the improved schizophrenic patients. The average scores for all personality factors were elevated, particularly the D, Hs and Pt components. It will be further noted that a similar trend appeared in the psychoneurotic group where the third scores also exhibited significant elevations. Many of the unimproved schizophrenic patients manifested clinically an increase in anxiety, hypochondriasis, as well as paranoid and depressive trends after the immediate post-shock phase had passed.

#### RORSCHACH FINDINGS

Twenty schizophrenics were given Rorschach examinations(4) before and after ECT: of these patients eight were much improved, six were improved, and six remained unimproved two to four weeks after termination of treatment when the post-treatment Rorschach records were taken. Little difference was observed between the pre-treatment and post-treatment records of the unimproved patients. There was, however, a difference between the pre- and post-treatment records of the improved patients. This is in accordance with the general experience that the Rorschach records parallel fairly closely clinically marked changes in the patient's personality. However the difference was not so great as to be conspicuous in those components of the Rorschach which are usually tabulated. Table 2 summarizes some of the more important components.

Perhaps the most significant conclusion from this table is that those schizophrenics who benefited from ECT have shown less deviation from the norm of the average healthy adult than those who did not benefit from ECT. The same conclusion was reached previously when a group of insulin-treated schizophrenics had been studied. The smaller deviation of the improved group from the norm established by healthy adults is indicated by such components as human move-

characteristic perceptanalytic (Rorschach) feature of schizophrenics was the great difference in the quality of their best and most adequate responses on the one hand and the poor responses on the other. Such unexpected variations in the quality of the performance level are typically schizophrenic, not only clinically but in perceptanalysis as well(4). The frequency and the range in this qualitative variation of the performance level were significantly reduced after suc-

TABLE 2

## PRE-TREATMENT AVERAGES

	N	R	W	d	M	CR	Cn	F+%
Much Improved	8	20.7	9.2	1.8	2.7	2.6	—	79
Improved	6	18.9	6.5	2.1	1.6	2.3	—	71
Unimproved	6	21.4	5.1	4.8	.6	1.1	.9	54
Total	20	20.4	6.8	2.8	1.7	2.1	.3	69

## POST-TREATMENT AVERAGES

	N	R	W	d	M	CR	Cn	F+%
Much Improved	8	26.5	7.2	2.3	2.9	2.8	—	86
Improved	6	20.8	6.0	.8	2.0	3.1	—	78
Unimproved	6	19.4	5.3	4.6	.5	1.9	1.7	52
Total	20	22.7	6.3	2.5	1.9	2.6	.5	73

ment, or M; color responses, or CR; as well as the percentage of sharply conceived forms, or F+%. These findings indicated that the variety and intensity of psychological experiences of the improved group were more like those in the healthy group, than in the unimproved group. The capacity for prolonged and directed voluntary attention was also superior in the improved group.

The post-treatment Rorschach records of even the most improved schizophrenics show such basic similarities with the pre-treatment records of the patients as to suggest that apparently no basic personality change takes place in the schizophrenics as a result of ECT. It requires a more detailed analysis of the records to point out changes after successful treatment. Perhaps the most significant change is a reduction in the variability of the performance level. The most

successful ECT. Associated with this change was a drop in secondary elaboration. Some of the most absurd ideas of the schizophrenics were contained not in the percepts originally elicited by the Rorschach plates but in the secondary elaboration prompted by these percepts. After successful treatment, the schizophrenic came much more rapidly to the point, refraining from his usual wandering. In this respect ECT and insulin treatments do not appear to differ significantly.

## DISCUSSION

From the Rorschach evidence at least, the impression was gained that one of the effects of a successful ECT was the improved capacity of the patient to be on his guard in disclosing his personality deficiencies. The restraint in the secondary elaboration of his



ideas seems to be correlated with the patient's unwillingness to discuss freely his subjective complaints. It is likely that this perceptanalytic finding corresponds to the schizophrenic's so-called lack of insight which can be observed so frequently even after very successful treatment. The basic personality defects were still largely retained but successful treatment enabled the patient to be more prudent in manifesting these defects even to his physician. This seemed to be particularly true of the paranoid schizophrenics.

Qualitative analysis of the pre- and post-treatment Rorschach record of our twenty ECT schizophrenics suggested that improvement seemed to consist mainly of a reduction of the patient's subjective disturbance by a psychosis, the psychosis itself undergoing apparently little change(5, 6). This reduction in the fear of the psychosis enables the patient to make better contact with his environment(7, 8). After successful ECT, the patient can make more efficient use of whatever capacities he still possesses. Schizophrenics who are not markedly disturbed by their psychosis and personality changes associated with the psychosis do not seem to benefit from ECT even if their personalities do not seem to have deviated very conspicuously from the norm of healthy adults(9).

A number of negative and positive conclusions may be drawn from the data obtained by the Minnesota Multiphasic Personality Inventory and the Rorschach Test:

1. The Minnesota Inventory cannot be used as a dependable diagnostic aid. The authors of the Minnesota Inventory report that the Inventory correctly identifies patients clinically diagnosed as schizophrenic in 64%. In our 75 patients the Minnesota differentiated schizophrenics from non-schizophrenics with about the same degree of accuracy, *i.e.*, in 61% of our 75 cases. Taking a score of 70 or above on the schizophrenic scale as suggestive of schizophrenia and any score below 70 as not indicating schizophrenia, the Minnesota detected only 20 or exactly one-half of our 40 schizophrenics. Nine of our 35 non-schizophrenics also received scores indicative of schizophrenia according to the Minnesota. There was no difference in the degree of accurate

recognition between the improved and unimproved schizophrenics. This very high degree of error is understandable if one considers that the Minnesota like all other personality inventories, cannot determine the degree of intellectual deviation. The patient must admit the false nature of his hallucinations and delusions, the psychogenic origin of his somatic complaints, and other psychopathological features before his score on the Minnesota schizophrenia scale can become significantly high.

The recognition of a manic-depressive depression by means of the Minnesota is even less valid. It was correct in only 57 percent of our 75 patients. Nineteen of our 24 manic depressives and 27 of our non-manic depressives obtained significantly high scores (70 and above) on the depression scale, which suggested a manic-depressive depression according to the norms provided with the Minnesota Inventory. Thus the diagnostic validity of the Minnesota was so low as to make the test impractical as a diagnostic aid especially in difficult problems of differential diagnosis.

2. The Minnesota was also a failure as a prognostic aid. A glance at the pre-treatment scores of the schizophrenics who benefited from treatment and of those who did not, reveals no significant differences whatever. Thus the Minnesota would not be helpful in the selection of proper patients for treatment.

3. However, the Minnesota appeared to have a limited prognostic value when used one week after termination of treatment for determining whether or not the patient would retain any improvement that had taken place. In the schizophrenic group there appeared, within a week after termination of treatment, significant differences between the patients who remained improved and those who showed no persisting improvement. If the score immediately after treatment dropped below the pre-treatment score by at least 10 points on the hypochondriasis, depression, hysteria and psychopathic-deviation scales, then the improvement was maintained. It is of interest to note that the immediate post-treatment examination revealed such differences between improved and unimproved schizophrenics, especially since most patients at that time still suffered from memory and

other disturbances associated with ECT. No examinations were made later than 3 months following treatment; consequently nothing can be said regarding the possibility of later relapses.

4. In the unimproved schizophrenics and psychoneurotics, the second post-treatment tests taken one to two months after termination of treatment yielded higher scores than the pre-treatment tests. In this manner the Minnesota reflected the increase in symptomatology and anxiety which these patients frequently had when they realized that shock therapy had not helped their condition. It is possible, also, that the treatment had weakened the patients' defense mechanisms and thus enabled the deepseated anxieties, phobias, etc., to become more pronounced.

In contrast to the Minnesota and other personality questionnaires which were not helpful as diagnostic or prognostic aids, the perceptanalytic test of Rorschach was a valuable prognostic and diagnostic aid. The Rorschach findings paralleled the personality changes observed clinically. Even before treatment there was a significant difference between the Rorschach records of improved and unimproved schizophrenics treated with ECT.

The improvement after shock therapy seemed to depend on two different factors. One condition for improvement was the presence of only mild or no intellectual regression. In other words, the patient's intellect should not be markedly affected by the psychosis. The other condition was that there be a marked discrepancy between the potential and the actual level of the schizophrenic's mental or psychological functioning. The greater this discrepancy, the greater the improvement seemed to be, other conditions being equal.

According to the Rorschach findings, the discrepancy between the potential and actual mental functioning was apparently correlated with the schizophrenic's anxiety engendered by his awareness of the personality changes which had taken place as a result of the psychosis. To use simple language, many schizophrenics "exaggerate" the effect of the psychosis upon their personalities. They become unduly anxious and withdrawn in an apparent attempt to minimize the chances of maladjustment and conflict with the environ-

ment. Some become anxious and agitated as if trying to escape painful insight into their personality deficiencies by means of a vigorous and usually sudden increase in motor activity. The patients seem so preoccupied with their anxiety and what might be termed their attempts to cure themselves of the anxiety that they neglect to function as well as they could in objective reality and in social relationships. If anxiety and depression are secondary results of the psychosis, then successful shock therapy removes these secondary effects of schizophrenia (6). According to available Rorschach evidence, schizophrenics whose actual psychological performance level is near their potential level do not improve even when these patients show very few, or no primary intellectual deficiencies caused by the psychosis (7, 9).

The following personality changes have been observed in schizophrenics by means of the Rorschach method after a successful treatment: the patients became much more concise; they were less circumstantial; the logical coherence of their reasoning was improved. There was usually a definite improvement in the capacity for consciously directed and prolonged voluntary attention. They showed more control in thought and action. They were emotionally calmer and less sensitive. At the same time they appeared emotionally duller. These results probably can be explained fully by a decrease of emotional pressure. The decrease in anxiety and depression reacted favorably upon intellectual functioning. Thus, although there seemed to be no real improvement in intellectual capacity, the improvement in intellectual efficiency was very noticeable. The decrease in anxiety through successful treatment resulted in a lesser stimulation of imagination and thus revealed more clearly the emotional impoverishment of the schizophrenic.

Finally, as far as the perceptanalytic test of Rorschach is concerned, there seemed to be no difference in its prognostic value whether used in insulin coma treatment or in ECT.

#### SUMMARY

Personality studies were conducted on a group of 75 psychiatric patients classified

as psychoneurosis, schizophrenia, manic-depressive psychosis and involutional psychosis, before and after a course of electric convulsive therapy. The personality tests were made by means of the Minnesota Multiphasic Personality Inventory and the Rorschach perceptanalysis. The extent to which these tests may be utilized for evaluating the effects of electric shock therapy upon the personality structure are discussed. The diagnostic and prognostic value of these examinations are commented upon.

NOTE.—We wish to thank Miss Mary Szczerba for technical assistance in examining patients by means of the Minnesota Multiphasic Personality Inventory test and for her aid in the preparation of the graphs and tables.

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## EFFECTS OF CEREBRAL ELECTROSHOCK ON EXPERIMENTAL NEUROSES IN CATS<sup>1</sup>

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Initial animal experiments in our laboratory had demonstrated that drugs such as morphine(36), amytal(24) or alcohol(25, 26) which impaired cortical function(9, 22) thereby disorganized patterns of learned behavior to a degree roughly proportional to their complexity and relative recency of acquisition. Accordingly, when such drugs were administered to animals which had been subjected to acute motivational conflicts(19), the induced inhibitions, phobias, compulsions and other complex neurotic patterns were temporarily disintegrated, permitting the previously established goal-directed responses to reappear. To investigate the possibility that cerebral electroshock might have corresponding effects on "normal" and "neurotic" behavior, the following experiments were performed.

### METHODS

*Preliminary Training.*—By the use of an automatic apparatus described in previous communications(19) 8 cats were trained to lift the lid of a box for a pellet of food and then to delay this response until a bell and light signal had been given. Seven of these animals next learned to close an electric switch<sup>2</sup> that actuated the signals and feeder; finally, these animals were taught to walk away from the food-box around a glass barrier in order to reach and operate the switch in various positions.

*Induction of Neurosis.*—In 6 of the animals so trained an experimental neurosis was induced by subjecting them to an air-blast or electric shock at the moment of condi-

tional food-taking, then repeating this conflict-engendering experience from two to seven times at irregular intervals. As described elsewhere in detail(19), this procedure induced various neurotic aberrations of behavior which in the present experiments were observed and graded according to the criteria listed in Table 1. The daily mean of these gradings, as demonstrated in previous control studies(23, 26), furnished a statistically reliable "neurotic index" of the intensity of these aberrations in animals subjected successively to repetitions of the conflictful stimuli, exposure to cerebral electroshock, re-testing in the apparatus and later retraining procedures (Table 2).

*Technique of Electroshock.*—After the experimental neurosis had become stabilized over a period of from six weeks to a year, all of the neurotic animals and two normal controls (Table 2) were subjected to a course of cerebral electroshocks calculated to apply to the cat the dosages of current used in clinical therapy. The electrodes were copper strips 4 cm. square coated with conducting jelly and held by means of a plastic arch so as to conform closely with the cranium. The course consisted of ten applications at two or three-day intervals of a 30-volt 60-cycle current passed for five seconds through the cerebrum. During each convulsion the animal was suspended in a cloth hammock, from which it was removed to an observation cage after the tonic movements had ceased.<sup>3</sup>

*Anatomic Controls.*—After from one day to 12 weeks of further observation and re-testing in the experimental situation, the animals were anesthetized by the intraperitoneal injection of 6 cc. of 6 percent nembutal. The brains were then removed, fixed in formalin, embedded in celloidin and sec-

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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<sup>2</sup> The eighth animal was a kitten which had learned the signal-responses at the age of two months but had not been taught to use the switch.

<sup>3</sup> The authors are indebted to Dr. A. E. Walker and Mr. J. Kohlross of the Department of Neurosurgery, University of Chicago, for their cooperation in this portion of the research.

TABLE 1

## EXPERIMENTAL OBSERVATIONS AND SCALE OF RATINGS \*

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| <p>I. <i>Food Avoidance</i></p> <ul style="list-style-type: none"> <li>0 Feeds freely on pellets</li> <li>1 Erratically or on fish only</li> <li>2 From box only when guided</li> <li>3 Hand feeding only</li> <li>4 Special food only</li> <li>5 Rejects all food</li> </ul> <p>II. <i>Food Box Avoidance</i></p> <ul style="list-style-type: none"> <li>0 Avidly opens box</li> <li>1 Spontaneous but distractible</li> <li>2 Feeds only if lid open</li> <li>3 Approaches when guided</li> <li>4 Resists guidance</li> <li>5 Actively avoids food box</li> </ul> <p>III. <i>Switch Avoidance</i></p> <ul style="list-style-type: none"> <li>0 Works switch spontaneously</li> <li>1 Works switch with guidance</li> <li>2 Use irregular or sporadic</li> <li>3 Hesitant and incomplete</li> <li>4 Will not use switch</li> <li>5 Shows active avoidance</li> </ul> <p>IV. <i>Fear of Signal</i></p> <ul style="list-style-type: none"> <li>0 No fear of signal</li> <li>1 Slight startle</li> <li>2 Occasional fear, submaximal</li> <li>3 Occasional fear, maximal</li> <li>4 Consistent fear, submaximal</li> <li>5 Consistent fear, maximal</li> </ul> <p>V. <i>Situational Retreat</i></p> <ul style="list-style-type: none"> <li>0 Enters rear † only for switch</li> <li>1 No preferred position in cage</li> <li>2 Prefers rear; emerges for signal</li> <li>3 Remains in rear unless guided</li> <li>4 Resists guidance from rear</li> <li>5 Tries to get to rear even when obstructed</li> </ul> <p>VI. <i>Fear of Constriction ‡</i></p> <ul style="list-style-type: none"> <li>0 None, feeds on signal</li> <li>1 Slight restlessness but feeds</li> <li>2 Leaves food at movement of barrier</li> <li>3 Ignores signal when constricted</li> <li>4 Phobic reactions increased when constricted</li> <li>5 Panic reaction when constricted</li> </ul> | <p>VII. <i>Apparatus Avoidance</i></p> <ul style="list-style-type: none"> <li>0 Active efforts to enter cage; remains</li> <li>1 Indifferent to entry or removal</li> <li>2 Leaves apparatus for outside attraction</li> <li>3 Indifferent to entry; later attempts escape</li> <li>4 Sustained phobic reactions to placement</li> <li>5 Violently resists entry; attempts escape</li> </ul> <p>VIII. <i>Hypersensitivity</i></p> <ul style="list-style-type: none"> <li>0 Response focused on feeding situation</li> <li>1 Alert but not distractible</li> <li>2 Over-alert, distractible</li> <li>3 Occasional generalized startle</li> <li>4 Frequent generalized startle</li> <li>5 Generalized phobic response (crouching, panic)</li> </ul> <p>IX. <i>Avoidance of Experimenter</i></p> <ul style="list-style-type: none"> <li>0 Dependent, seeks petting</li> <li>1 Friendly, spontaneous</li> <li>2 Tolerant only</li> <li>3 Indifferent, solitary</li> <li>4 Attempts escape</li> <li>5 Active hostility</li> </ul> <p>X. <i>Motor Disturbance</i></p> <table border="0" style="width: 100%;"> <tr> <td>0 None</td> <td></td> </tr> <tr> <td>(1) Hyperactive</td> <td>1 Hypoactive</td> </tr> <tr> <td>(3) Tics</td> <td>3 Immobile</td> </tr> <tr> <td>(5) Convulsions</td> <td>5 Catalepsy</td> </tr> </table> <p>XI. <i>Substitutive Behavior</i></p> <ul style="list-style-type: none"> <li>0 None</li> <li>1 Preening, playing, rubbing</li> <li>3 Deviant responses (prolonged switch pressing, excessive clawing, pacing, rituals)</li> <li>5 Persistent bizarre responses</li> </ul> <p>XII. <i>Autonomic Changes</i></p> <ul style="list-style-type: none"> <li>0 None grossly observed</li> <li>1 Horripilation, pupillary dilation, vascular dilation</li> <li>3 Trembling, tachycardia, irregular breathing, salivation, retching</li> <li>5 Vomiting, urination, defecation</li> </ul> | 0 None |  | (1) Hyperactive | 1 Hypoactive | (3) Tics | 3 Immobile | (5) Convulsions | 5 Catalepsy |
| 0 None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |  |                 |              |          |            |                 |             |
| (1) Hyperactive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1 Hypoactive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |  |                 |              |          |            |                 |             |
| (3) Tics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3 Immobile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |  |                 |              |          |            |                 |             |
| (5) Convulsions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5 Catalepsy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |  |                 |              |          |            |                 |             |

\* These ratings were employed in calculating a mean "neurotic index" which was useful in comparing the behavior of one or more animals under various conditions and at various times. While this index was found to be valid for statistical purposes, the patterns individually graded are not to be considered as independent variables in a behavioral continuum.

† "Rear" refers to the portion of the cage away from the food-box and entered with some difficulty around a glass barrier.

‡ Fear of constriction was tested by moving the barrier slowly to a point 14 in. from the food-box, giving the feeding signal, and then moving the barrier back toward the box.

tioned sagittally. Twelve sections from each brain were then stained serially by H. & E., Nissl and Niemer techniques for microscopic examination.

### RESULTS

The results may be summarized as follows (*cf.* Table 2. and Plate 3).<sup>4</sup>

*Effects of Electroshock on Neurotic Behavior.*—In general, all neurotic patterns showed progressive disintegration during electroshock therapy, *i. e.*, all of the neurotic

simple switch-manipulation and other goal-directed patterns that had been relatively well established before the induction of the neurosis. The latter effects were particularly evident in cat No. 2 which had been given only two trials in the apparatus during the course of the electroshock therapy. This animal had been markedly inhibited and phobic in the experimental cage before treatment, yet two hours after the tenth electroshock the animal readily re-entered the apparatus, operated the switch efficiently and

TABLE 2

Anim. no.	Neurotic index before shock *	Duration of neurosis	No. runs during shock series	Neurotic index 24 hrs. after shock no. 10	Follow-up	Rating index last run
1	3.91	Over 12 mo.	27	0.50	10 weeks	0.00
2	2.08	6 weeks	2	0.41	8 weeks	0.41
3	3.84	12 weeks	27	2.23 †	12 weeks	0.33
4	2.33	Over 12 mo.	27	0.36	1 week ‡	—
5	2.00	4 weeks	0	1.58 §	4 weeks	0.53
6	0.30	None	0	1.16	1 week	0.00
7	0.09	None	27	0.54	1 day	—
8	2.58	6 weeks	27	0.33	6 weeks	0.08

\* Cf. Table 1 and footnote. An index of less than 1 generally represents no or mild irregularities; 1 to 2, moderate neurosis, 2 to 3, marked neuroses; above 3, severe neurosis.

† Cat. No. 3 lost the specific phobias associated with its neurosis, but developed marked general anxiety in the course of shocks. There was a gradual recovery with guidance during the follow-up period, although a similar period of guidance before shock had been ineffective.

‡ Cat No. 4 died of an intercurrent distemper at the end of this period.

§ Cat No. 5 lost his neurotic symptoms after the shock series, but did not feed normally until after medication for intestinal parasites one week later, after which the rating index dropped to .08.

animals showed lessened physiologic manifestations of anxiety in the locale of the experimental cage, diminishing startle and phobic reactions to the feeding signals or to space constriction, disinhibition with regard to opening the food-box, passing the barrier or operating the switch, and a mitigation of cataleptic motor disturbances and of compulsive and regressive behavior. These effects appeared within two hours after the first or second electroshock but generally retrogressed within 24-48 hours until the fourth shock, subsequent to which improvement became continuous in three of the 4 cats tested in the apparatus (Fig. 1). Concurrently, in 5 of the 6 neurotic animals there was a progressive reappearance of exploratory activity, responses to signals,

fed at the ensuing signal without hesitation. Cat No. 5 which had not been tested in the apparatus at all during the course of the electroshocks at first showed considerable lethargy at the completion of the therapy; however, when a complicating intestinal infestation was discovered and treated about a week after the last shock a marked and immediate improvement in behavior occurred.

*Loss of Adaptive Capacities.*—Nevertheless, while this restitution toward relatively "normal" behavior was observed in all of the animals (Table 2, columns 6 and 7) and remained stable during periods of up to 12 weeks after the electroshocks were discontinued, other deficits appeared and persisted. Thus, the animals showed a general loss of spontaneity and initiative, occasional disorientations for space and timing of action, variable fragmentation and stereotypy of movement, difficulty in shifting from one response pattern to another (*i. e.*, signal-response to switch-manipulation); a ten-

<sup>4</sup> The methods and results of these experiments are also recorded on a 16 mm., 700 ft., fully subtitled motion picture film. "Electroshock Therapy in Experimental Neuroses," prepared by the authors and distributed by the Psychological Cinema Register, State College, Pennsylvania.

dency to remain "stimulus-bound" (*e. g.*, keeping the head in the food-box between signals) and, most evident of all, a marked impairment in the efficiency and facility with which the animal performed complex, recently-learned patterns such as passing the

with improvement in 24 hours; after the third shock there occurred more persistent difficulties in opening the food-box, and after the fourth there was increasing bewilderment, fragmentation of behavior and perseveration in the patterns of switch-manipu-

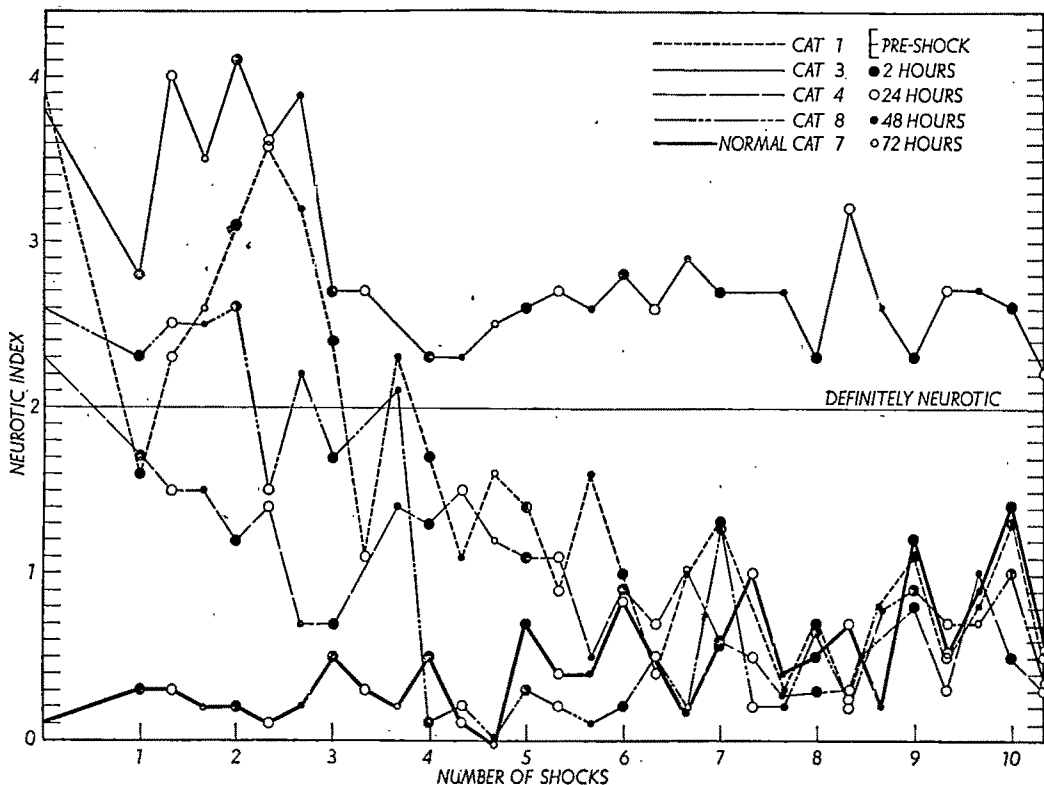


FIG. 1.—Sample effects of cerebral electroshock on normal and neurotic behavior in cats. In the neurotic animals Nos. 1, 4 and 8 each shock produced definite alleviation of neurotic patterns in two hours, although with fairly consistent retrogression at 24, 48, and 72-hour intervals until after the fourth or fifth shock. Animal No. 3, however, after an abortive second shock developed generalized phobic reactions which kept its neurotic index high (see text). In the normal animal (No. 7) progressive failures in complex switch-manipulation and other behavioral deficits gradually raised the neurotic index throughout the course of the electroshocks.

barrier and operating the signal-switch in difficult positions.

**Effects on Normal Behavior.**—Of the 2 normal animals subjected to electroshock, the one (No. 7) given daily runs in the apparatus during the course of electroshock treatment showed the following changes in behavior: Two hours after the first shock there was a transient loss of spontaneity in passing the barrier to reach the switch; after the second shock there was occasional spatial disorientation (*e. g.*, attempts to use the wrong passage around the barrier) again

lation and feeding. These became more persistent until, after the eighth shock, failures to use the switch, delays in signal-response, frustraneous opening of the food-box between signals (reversion to an early training pattern) and other deficits in adaptation as long as 72 hours after shock were reflected in a gradually rising "neurotic index" (Fig. 1, curve 7). Similar deficits were apparent in cat No. 6, which was not run in the apparatus during the course of the electroshocks; *e. g.*, 2 hours after the last shock the previously well-learned responses to the

signals with the food-box closed were obliterated, although they were easily restored by opening the box to display food. Similarly, the animal did not resume its accustomed use of the switch until it had accidentally depressed the switch-platform on several occasions; even thereafter the animal used the switch only when the latter was placed in proximity to the food-box. In other words, following electroshock the control animals, like the neurotic ones, showed loss of spontaneity, disorientations in time and space, difficulties of retention, constriction of perceptive and integrative fields, and fragmentation or disintegration of complex adaptations, as contrasted with the relative preservation of the simpler and more stable response-patterns that had previously been established.

*Contributory Observations.*—A number of phenomena relevant to certain biodynamic principles of animal behavior (20) also appeared in these studies and may be noted briefly under the following headings:

*Motivation.*—Even after electroshock had partially disintegrated the neurotic symptoms of our experimental animals it was apparent that the resumption of former patterns of adaptation still depended on the degree of normal motivation that could be reinduced. For example, hunger had to be evoked before effective signal-responses would reappear, and performance could be improved by use of especially tempting foods. As an instance of pathologic factors in this connection, cats No. 5 and No. 8 showed little or no recovery of normal feeding after electroshock until their intercurrent parasitic infestations had also been treated.

*Relative Experiential Evaluations.*—Animal No. 3, because of a defective electrode, received insufficient current at the time of the second electroshock to induce a complete convulsion with unconsciousness. Significantly, this animal thereafter showed specific fear of the electrodes, hammocks and Variac and manifested such general uneasiness in the laboratory that, despite the fact that its fear of the feeding-situation had not been resolved, it preferred to escape from the room into the experimental cage. Here a change of the food-reward from

dried meat to pellets of fish served to re-establish the signal responses in ten more days of testing, but even at the end of the course of electroshocks the neurotic index was still relatively high (Fig. 1); indeed, eleven additional weeks of special indulgences and retraining in the laboratory were required before further improvement could be secured (Table 2). Cat No. 1 also had an abortive second shock that did not appear to abolish consciousness, but its subsequent phobic reactions were less severe. The shocks seemed to induce immediate unconsciousness in all other instances, yet it is significant that six of the animals, although ordinarily friendly, often became actively resistant while being prepared for the treatments, and two of them (Nos. 3 and 6) showed marked evidences of anxiety under such circumstances. It is noteworthy that in these animals the amnesia and phobic associations were anterograde: *i. e.*, there was little struggling in the apparatus itself, but the handling of the animal preparatory to shock produced physiologic manifestations of fear.

*Cerebral Changes after Electroshock.*—All of the stained sections from the electroshocked brains were examined independently by three observers,<sup>5</sup> along with corresponding sections from two trained animals (Nos. 9 and 10) not exposed to electroshock. To add to the objectivity of these examinations the sections were labeled so as to furnish no information about the particular experimental procedure employed in the animal from which they had been taken. The consensus of these observers was that definitely pathologic changes occurred only in cat No. 4. The brain sections from this animal showed slight thickening of the basilar meninges, dilated vessels in the sulci, perivascular and subpial bleeding and, possibly, unidentified cellular inclusion-bodies (R.R.); however, this animal (cf. Table 2) had died of an intercurrent acute distemper six days after the last electroshock. The other sections occasionally showed vascular or capillary engorgement, slight distention of the Virchow-Robin spaces and scattered sub-

<sup>5</sup> Thanks are due to Dr. Richard Richter of the Department of Medicine, and to Dr. Jack Woolf, Department of Neurosurgery of the University of Chicago, for cooperating with one of us (J.H.M.) in this portion of the study.



pial hemorrhages, but since these changes were minimal and also appeared in the unshocked controls, they seemed attributable to the effects of the terminal anesthetic or to post-mortem artifacts. Certainly, none of the sections revealed gross cellular changes, marked gliosis or architectonic distortions that could be specifically attributed to the pathologic effects of electroshock (cf. plates). Consequently, the most likely inferences to be derived from the anatomical portions of our study were that the histologic and microscopic techniques employed were less adequate as an index of the molecular changes in brain structure or function produced by neurosis or electroshock than were the actual deviations in total behavior observed in the living animal.

*"Therapeutic" Factors in Electroshock.*—Our observations indicated, therefore, that cerebral electroshock can modify behavior (a) by disintegrating both the mnemonic and reactive factors in complex "neurotic" patterns such as inhibitions, phobias, and compulsions while leaving the simpler, goal-directed responses relatively intact, (b) by forcing behavior into new channels of adaptation, and (c) by making possible the re-establishment of latent and more "normal" patterns. In the latter instance various methods of ancillary therapy could then be employed, *e. g.*, increasing normal motivations, exerting environmental pressures to force the animal toward a solution of residual conflicts, guidance by the experimenter into re-exploratory behavior and, finally, active working-through of the problems on the part of the animal.<sup>6</sup> However, part of the price of recovery was a variable loss of certain higher adaptive capacities; *e. g.*, even at the end of their post-shock testing period, four of the animals in this study had not re-acquired their normal facility and efficiency in complex skills of which they had formerly been capable.

## DISCUSSION

Previous experiments have shown that convulsions produced in various animals by electroshock, by insulin hypoglycemia, or by the injection of metrazol disorganized

complex adaptive patterns such as maze-running (17, 34, 4) or the extinction of conditioned responses (31, 30, 13, 6). These effects have been attributed to temporary or permanent impairment of cortical functions either directly by anoxia (11) or by anoxia subsequent to depression of cerebral metabolism (40).

*Anatomic Effects.*—Definite histopathologic changes in the brains of animals subjected to electroshock have been reported in a number of studies,<sup>7</sup> but in some of these the currents used were excessively intense or prolonged; also, the effects noted may have been due to vascular disturbances arising from medullary (1) and diencephalic stimulation, or to mechanical injury of the brain during the convulsions. It is significant, therefore, that while acute ganglion-cell effects (11) and alterations in tissue permeability and conductance (33) were produced and exacerbated in the human brain by successive electroshocks, controlled post-mortem studies on experimental animals (1, 7, 16, 37) have revealed few or no permanent pathologic changes detectable by standard techniques.

*Clinical Parallels.*—Tests of human behavior after artificially induced convulsions yield results comparable to those obtained in animal experimentation in these respects: mental efficiency batteries following metrazol convulsions (38), and Rorschach records, handwriting and gestalt figure-drawings obtained after electroshock (18) show a severe impairment of performance immediately after shock followed by a gradual reorganization of function; nevertheless, various amnesic defects persist after the end of the treatment (35, 42). While the greater accessibility of patients after a course of shock combined with psycho-therapy may result in "improved" scores on general tests of intelligence, it seems probable that more highly specialized and sensitive tests will disclose subtle impairment of higher perceptive and integrative functions (category behavior) similar to those that result

<sup>6</sup> For a detailed discussion of these methods see reference (19).

<sup>7</sup> McMahon (27) on guinea pigs; Langworthy (15) on rats; Heilbrunn and Weil (12) in rabbits; Alpers and Hughes (2), Morrison and Weeks and Cobb (28) in cats; Neuberger et al. (29) in dogs.

from known organic lesions of the brain (8, 10, 14).

### SUMMARY

Six cats were made experimentally neurotic and were then subjected to cerebral electroshocks comparable to those used in clinical therapy. All of these animals showed a marked disintegration of inhibitions, phobias, compulsions and other neurotic patterns, with emergence of simpler, more normally readaptive behavior which could be further improved by guidance, retraining, and other corrective procedures. However, all of the neurotic animals and two normal controls subjected to the electroshocks also showed an impaired capacity for complex adaptations, with subsequent recovery in only 2 of the animals. In no case, however, could these deficits be correlated with corresponding histopathologic changes in the brain. The significance of these observations in relation to the clinical use of shock therapy is briefly discussed.

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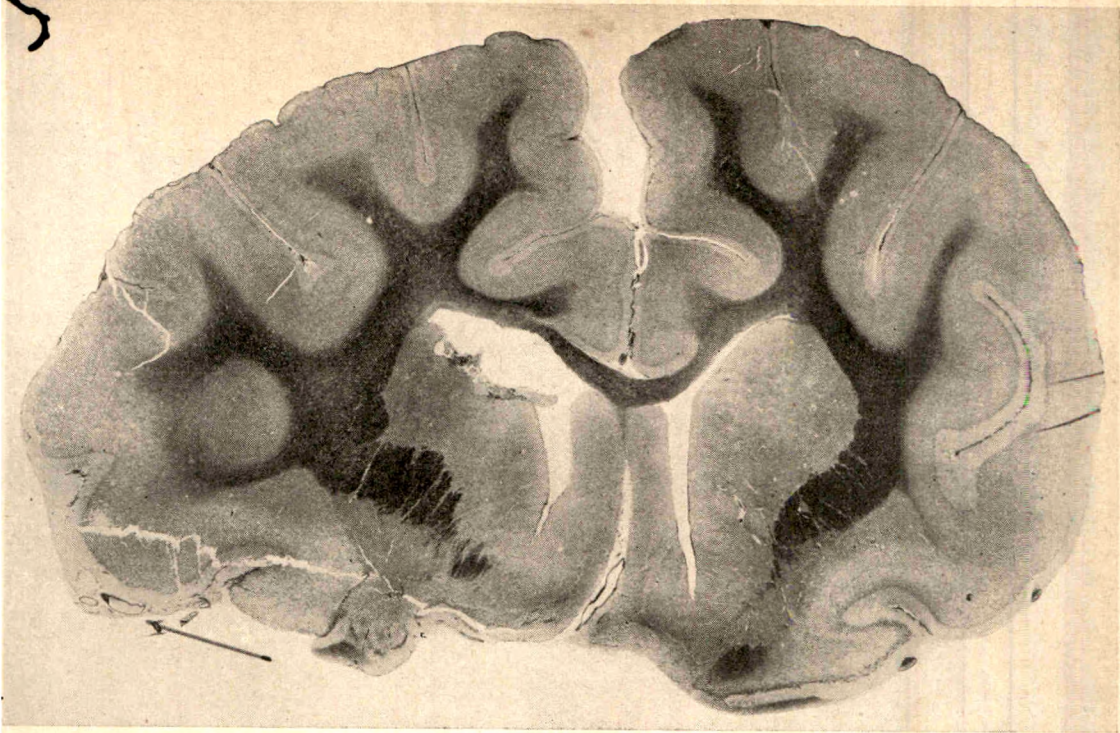


FIG. 2 A.

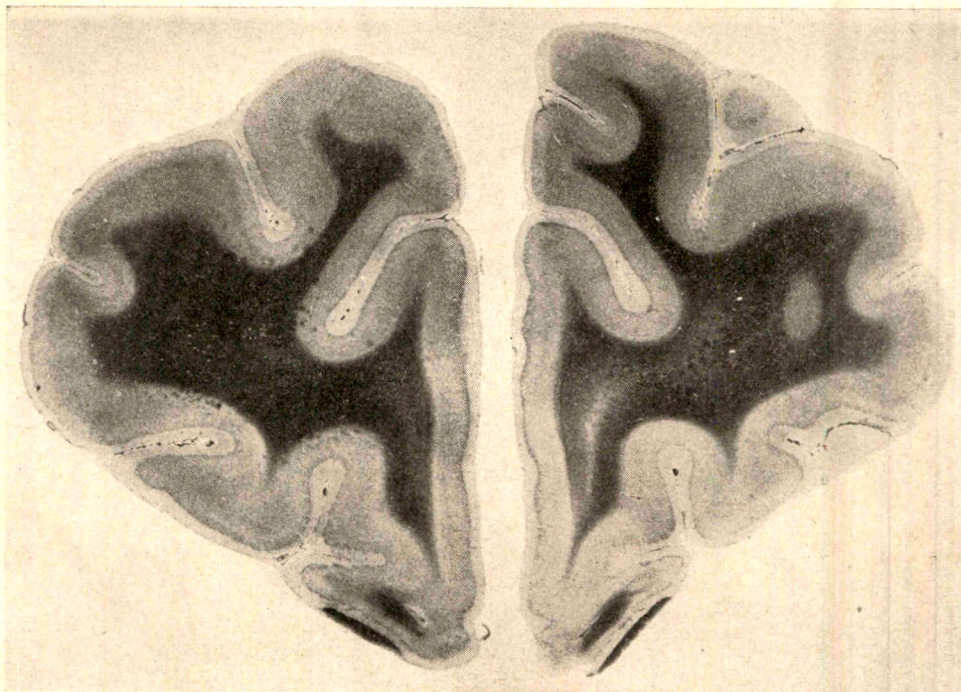


FIG. 2 B.

FIG. 2.—Sample sections from the brains of cats subjected to cerebral electroshock. (a) Cat 4, sagittal section through third ventricle, H. and E. stain; arrow points to pathologic changes summarized in text. (b) Cat 6, H. and E. stain, level of coronal sulcus. (c) Cat 7, H. and E. stain, level of hypothalamus. (d) Cat 8, Nissl stain, level of commissure.



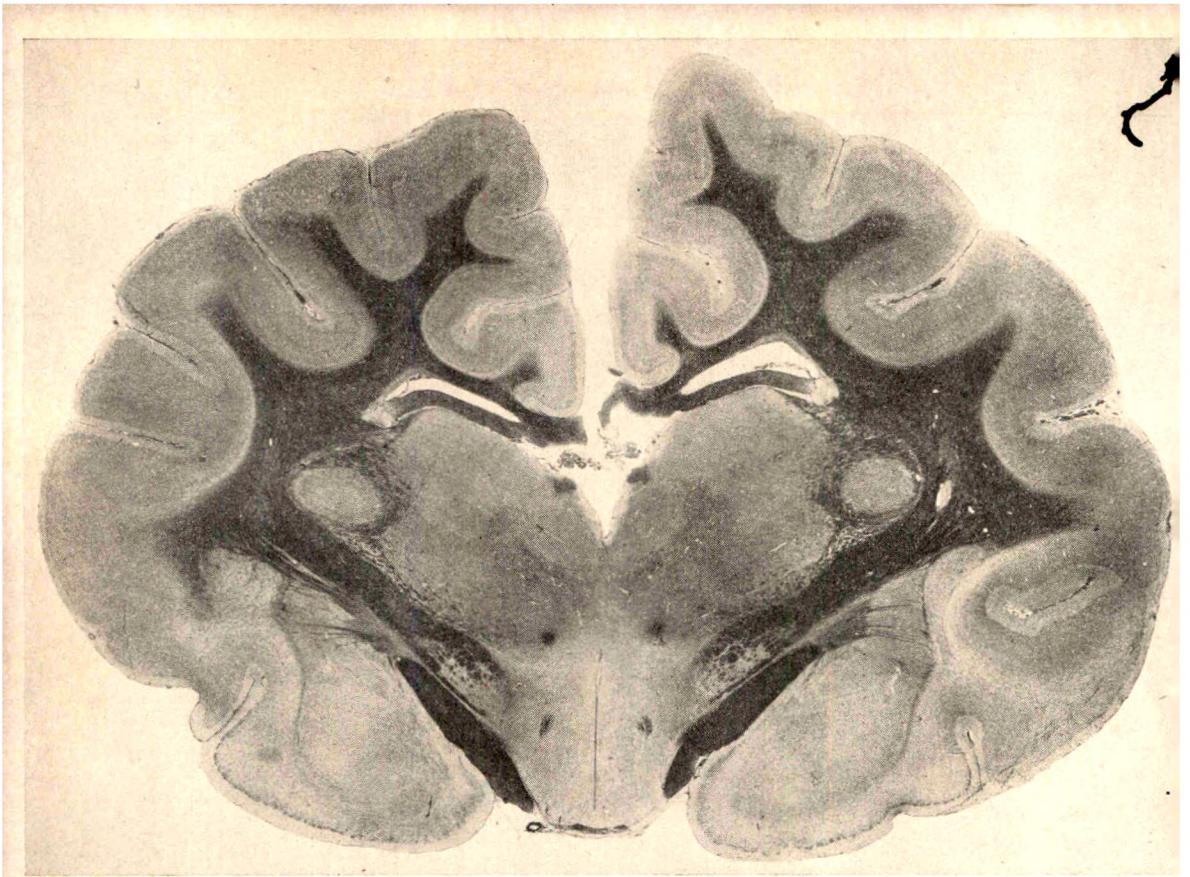
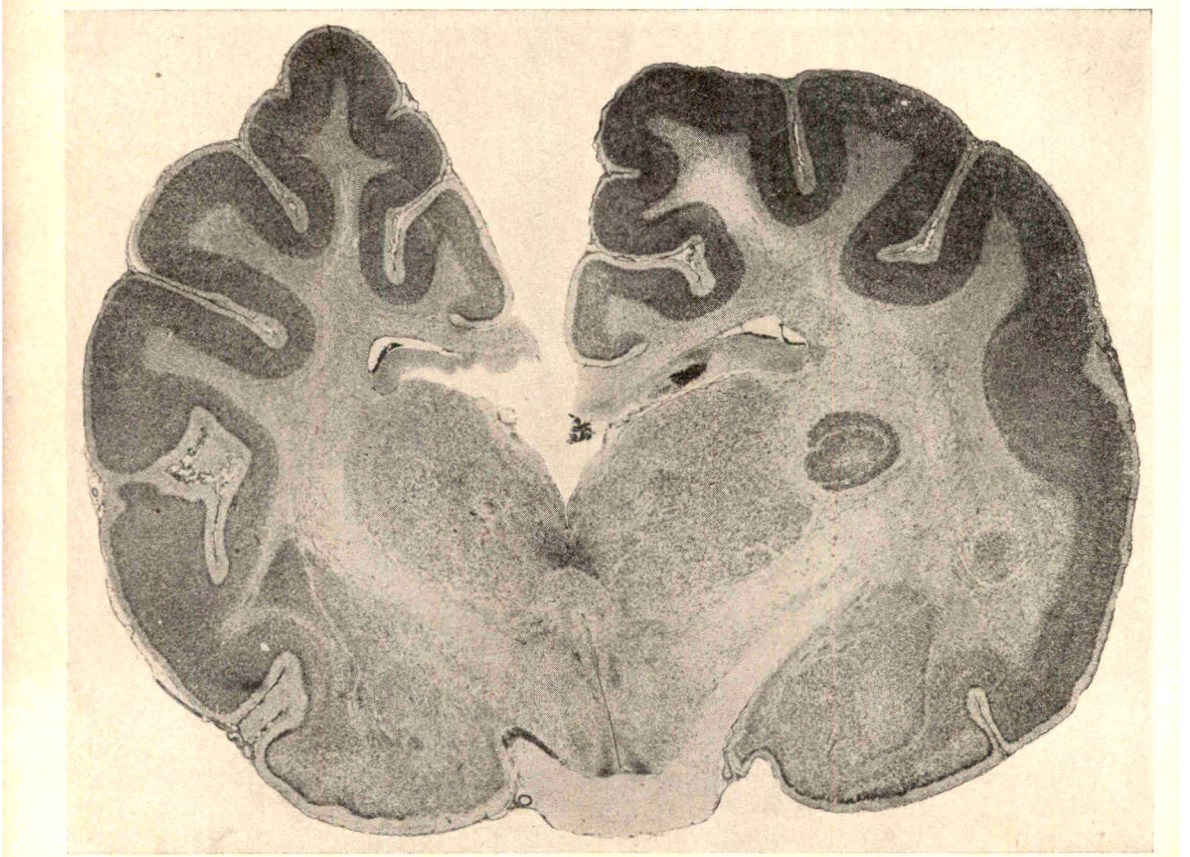


FIG. 2 C.



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## ELECTROSHOCK THERAPY

### A REVIEW OF OVER 23,000 TREATMENTS USING UNIDIRECTIONAL CURRENTS<sup>1</sup>

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The application of important physiological principles will soon bring about major changes in the currently accepted methods of electroshock therapy. Each change necessitates the re-evaluation of numerous factors. The use of minimal electroshock convulsive stimuli, employing relatively low intensity unidirectional currents, initiated by Friedman, Reiter, and the author (1) in 1940, has made possible a wider application of this therapy than the usual Cerletti-Bini technique has warranted. The introduction of electrical pulses of less than one millisecond duration will permit a further reduction in the electrical energy required (2).

This report presents a few aspects of what has been accomplished with the use of modified half-wave rectified 60-cycle current<sup>2</sup> at Traverse City State Hospital during the past 5 years. There and elsewhere therapeutic results, superior to those obtained by the more commonly used Cerletti-Bini technique, have been obtained with much less evidence of even temporary functional impairment of the brain beyond the immediate reorientation period of from 20 to 60 minutes following the convulsion. We have not needed to soften our convulsions with curare because the technique produces a smoother, less violent convulsion.<sup>3</sup> We have been able to carry out

psychotherapy concurrently with the treatments because the patient does not become disoriented or confused and his memory remains clear as far as the effects of the treatments are concerned. We have been able to continue the treatments in long courses in resistant cases with less fear of brain damage than with the Cerletti-Bini method. Up to May 1, 1946, 2,050 patients had been treated with electroshock therapy, and a total of 23,191 electroshock treatments have been given at Traverse City State Hospital.

The statistical principle which I have introduced is to review each patient at state intervals after the start of his shock therapy. This method makes the review data vary but standardizes the period reviewed in respect to each patient. For the chronic patient only ward improvement is expected but for early cases a high standard of social remission (rehabilitation) is the basis of evaluating the results of therapy.

#### THE FIVE HUNDRED MOST CHRONIC PATIENTS

It is generally accepted that the duration of the illness before the start of shock therapy is of primary importance in prognosis.

The age range of this group was 18 to 63 and the range of treatments 64 to 194 per patient. The span of time over which the treatments were given ranged from 5 mos. to 4 yrs., 3 mos. The total number of treatments for all 14 patients was 1,411. One patient was a severe diabetic. Two showed minimal hypertrophic spur formation. One had carried a systolic B.P. of around 240 throughout. One showed considerable osteoporosis of the spine.

X-rays of the dorsal and lumbar spines failed to reveal any compression or wedging in a single one of the 14 cases. This result was better than we dared expect, and our only explanation is that we do not have any or at least not more than a few silent vertebral fractures. We have been quite conscientious about X-raying the spines of all patients who complain of back discomfort lasting more than a few hours. The fact that our patients are not dulled by our treatments may explain why back symptoms are not overlooked. Of the small number who do complain of back symptoms, only a few have had vertebral compressions.

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946. Manuscript revised Jan. 1947.

From the Traverse City State Hospital, Traverse City, Mich.

<sup>2</sup> The Reiter Electrostimulator, manufactured by Reuben Reiter, D. Sc., 1366 York Ave., New York 21, New York.

<sup>3</sup> There have occurred a few vertebral compressions and skeletal complications in our series. Curare may still be indicated in some very exceptional cases, but we have considered it in only 2 cases in more than 5 years' experience. In January 1947, we put our claims to the most rigid test possible. We selected 14 cases.

Each of these (1) had had over 50 electroshock convulsions given on the author's service, (2) had never had shock therapy of any kind elsewhere, (3) was still on the author's service, and (4) had never had an X-ray of the spine before.

and all workers testify that chronic cases are resistant to cure. However, as a conservative estimate, 40% of our most chronic patients have shown significant improvement in ward behavior when adequately treated with electroshock.

The 500 most chronic patients who have received electroshock therapy have been reviewed in detail. These men and women were admitted to Traverse City State Hospital during a period of over 43 years, and none was started on electroshock less than 3 years after admission. The treatments were given by 13 different doctors without any uniform plan of selection of the patients. Many were selected for treatment because they were extremely difficult ward problems.

Improvement in ward behavior meant significant decrease in wetting, soiling, destructiveness and noisiness, and improvement in cleanliness, eating habits, general cooperation, work adjustment, and sociability. The basis of comparison was the patient's previous ward behavior. No attempt was made to judge basic improvement in the psychosis other than in the ward behavior. Only a small number of these chronic patients improved enough to leave the hospital, even with the help of treatments.

A detailed analysis of the 500 most chronic patients under discussion has been made, but space does not permit the publication of these tables and graphs in full. There were 36 different diagnoses included: 6% were classified as manic-depressive-manic; 9% dementia præcox, type unspecified; 22% dementia præcox, hebephrenic; 17% dementia præcox, catatonic; 18% dementia præcox, paranoid; 6% mental deficiency with psychosis; and 22% miscellaneous (30 different diagnoses) (Table 1 #).<sup>4</sup>

The distribution of the age at the start of treatment of the 500 most chronic patients reveals a median age for the women of 47 years and for the men, 42 years; but the improved group had very nearly the same age distribution as the unimproved group (Tables 2A # and 2B #).

Among the 500 were 145 chronic patients who had been treated previously with other

shock therapy but had responded inadequately. Possibly the previous treatments kept them somewhat more responsive to treatment than the previously untreated patients. Four months after the start of electroshock therapy 41% of these 145 patients showed ward improvement. The figure for the whole 500 was 33%. The standard errors of the respective percents were 4.1% and 2.1%, and the critical ratio of the difference of the percents was 1.7, which is fairly significant<sup>5</sup> (Tables 3 # and 4 #).

The most consistent correlation with improvement rate was the number of treatments administered. Improvement in evidence 4 months after the start of treatment was usually not maintained unless additional treatments were given. This brings out a significant point. These patients are suffering from a chronic ailment with a strong tendency to relapse into their previous inadequate state. The best we can offer them at present is a maintenance treatment.

<sup>5</sup> The standard error of a percent was calculated as suggested in a personal communication from Dr. H. H. Dedichen(5), Oslo, Norway, as follows:

$$\text{Standard error } (\sigma) = \sqrt{\frac{h(1-h)}{n-1}} = \sqrt{\frac{\frac{r}{n} \left( \frac{1-r}{n} \right)}{n-1}}$$

Where  $r$  = number improved,  $n$  = number of cases, and  $h = \frac{r}{n}$ . This answer would be in decimals so should be multiplied by 100 to read in percents. Furthermore, the standard error of the difference between two percentages would be calculated as follows:

Standard error of the difference ( $\sigma_{diff}$ ) =  $\sqrt{\sigma_1^2 + \sigma_2^2}$  where  $\sigma_1$  and  $\sigma_2$  are the standard errors of the respective percents.

The statistical significance of the difference between two percents would be the actual difference divided by the standard error of the difference, giving a critical ratio. A table of the chance probabilities of such ratios can be found in the Handbook of Chemistry and Physics(7). For example, a ratio of 1 would mean that the odds are only about 2 to 1 that the difference was not purely chance. A ratio of 2 would mean that the odds were about 21 to 1 that the difference was not purely chance. For a ratio of 3 the odds would be about 369 to 1 against chance. Furthermore, when the total number of cases is less than 30 the critical ratio of the difference does not indicate the full chance factor. Supplementary discussion of these formulas can be found in Lindquist(8).

<sup>4</sup> The tables and figures marked with this sign # have been omitted for lack of space but will be supplied by the author on request.

Danziger and Kindwall(3) have indicated a method of estimating the adequacy of treatment; namely, find the cumulative number of treatments required for half of those who improved and double that figure. Thus, 33% of the 500 chronic patients showed ward improvement at the review 4 months after the start of treatment. Referring to Fig. 1, it is evident that 16.5% of the cases showed improvement with approximately 4 treatments. This would give the figure of 8 treatments as the minimum adequate trial of therapy at the 4-month review. If those who were unimproved and who were given 10 treatments or less are excluded from the

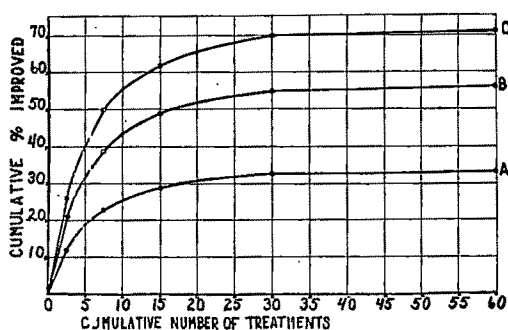


FIG. 1.—Cumulative ward improvement rates, chronic men and women combined, 4-month review. A. All 500 cases. B. Excluding unimproved cases treated with 5 or less treatments, leaving 296 cases. C. Excluding unimproved cases treated with 10 or less treatments, leaving 235 cases. See Table 5 #.

group as not having been given an adequate trial of treatment, a figure of 71% improved is obtained which is undoubtedly too high. A compromise calculation is to exclude those who were unimproved but had only 5 or less treatments. There can be little argument against the claim that such patients were not given adequate trial of therapy. This gives a figure of 56% improved, which still seems too high and probably means the clinical judgment was adequate to foresee the unfavorable outcome even with less than 5 treatments (Table 5 #).

At the 4-month review the median number of treatments per patient was about twice as high for the women as for the men, yielding 38% ward improvement for the women and 30% for the men with a critical ratio of the difference of 1.9, which is fairly significant (Table 5 # and Fig. 2 #).

The improvement rate drops off at subsequent review periods. The chronic men were treated less persistently than the women. In the 24-month review period, excluding the unimproved cases who had 5 or less treatments, there is an improvement rate of 40% for the women and 27% for the men. If the unimproved cases who had 10 or less treatments are excluded, the improvement rate becomes 44% for the women and 41% for the men (Figs. 3 # and 4 #).

A detailed study of the ward improvement rates at the 4-month review according to diagnosis and according to the number of treatments was made for the women (Table 6 #). These findings have been grouped in Table 7 and Fig. 5 showing that the diagnoses manic-depressive, manic, dement praecox, type unspecified, and mental deficiency with psychosis showed a better response than the hebephrenics, catatonics, and paranoids. The two groups were given nearly the same number of treatments per patient on the average. Examination of the record reveals that the cases of dementia praecox type unspecified, were so diagnosed before the classification was up to present standard of differentiation and included less well defined cases than those now specified hebephrenics, catatonic, and paranoid.

Table 7 also shows the corrected figure when the unimproved chronic women with 5 or less treatments are excluded from the diagnostic groups. This brings the ward improvement rate for chronic hebephrenics, catatonics, and paranoids above 40%. There is considerable difference of opinion as to what to consider improvement in the chronic patients, but a maintenance program of at least 20 treatments per year will maintain a significant degree of ward improvement in at least 40% of these most chronic patients. The use of minimal currents makes such a program possible without causing cumulative brain damage in the patients.

#### THE 541 FIRST ADMISSIONS TREATED WITH ELECTROSHOCK ONLY, AND WITHIN 4 MONTHS AFTER ADMISSION

For recent admissions and readmissions we have followed a policy of giving nearly all patients aged 60 or under a trial of treatments unless they show prompt signs



TABLE 7

CUMULATIVE WARD IMPROVEMENT RATE AT 4-MONTH REVIEW, RELATED TO NUMBER OF TREATMENTS;  
CONTRASTING GROUPS OF DIAGNOSES, CHRONIC WOMEN

	Cumulative number of treatments up to date of review				
	1-5	1-10	1-20	1-40	Total
<i>Group A—58 cases</i>					
Manic-depressive-manic.					
Dementia præcox—type unspecified.					
Mental deficiency with psychosis					
Cumulative No. of cases.....	25	42	51	58	58
Cumulative No. imp.....	9	21	26	29	29
Cumulative % imp.....	16%	36%	45%	50%	50%
See Fig. 5, Curve A					
Standard error of the %.....	4.9	6.4	6.6	6.6	6.6
<i>Group B—126 cases</i>					
Dementia præcox, hebephrenic.					
Dementia præcox, catatonic.					
Dementia præcox, paranoid					
Cumulative No. of cases.....	57	76	106	122	126
Cumulative No. imp.....	12	22	31	38	40
Cumulative % imp.....	10%	17%	25%	30%	32%
See Fig. 5, Curve B					
Standard error of the %.....	2.7	3.4	3.9	4.1	4.1
Difference, Group A minus Group B.....	6%	19%	20%	20%	18%
Standard error of the difference.....	5.6	7.2	7.7	7.8	7.8
Critical ratio .....	$\frac{A-B}{\sigma_{diff}}$	1.1	2.6	2.6	2.3
<i>Group A—42 cases</i>					
Excluding the 16 unimproved cases with 1-5 treatments, leaving 42 cases.					
Cumulative No. of cases.....	9	26	35	42	42
Cumulative No. imp.....	9	21	26	29	29
Cumulative % imp.....	21%	50%	62%	69%	69%
Standard error of the %.....	6.3	7.8	7.6	7.2	7.2
<i>Group B—81 cases</i>					
Excluding the 45 unimproved cases with 1-5 treatments, leaving 81 cases.					
Cumulative No. of cases.....	12	31	61	77	81
Cumulative No. imp.....	12	22	31	38	40
Cumulative % imp.....	15%	27%	38%	47%	49%
Standard error of the %.....	4.0	5.0	5.4	5.6	5.6

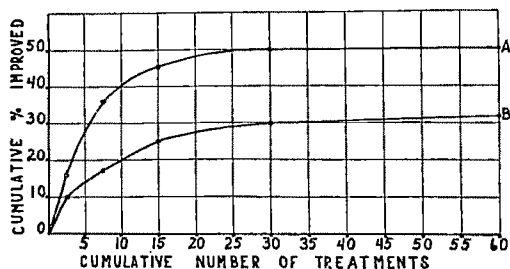


FIG. 5.—Cumulative ward improvement rates of chronic women at 4-month review, comparing diagnostic groups. A. Manic-depressive, manic, dementia præcox—type unspecified, and mental deficiency with psychosis—58 cases. B. Dementia præcox, hebephrenic, catatonic, and paranoid—126 cases. See Table 7.

spontaneous improvement, or unless there are specific contraindications. The prognosis is often impaired if treatment is delayed until the symptoms become stereotyped.

Over 60% of all first admissions aged 60 or under who were treated early and adequately were rehabilitated by the end of 1 year; *i. e.*, they made a satisfactory social readjustment and were home or independent. By the end of the second year 65% were rehabilitated if adequately treated.<sup>6</sup> Psycho-

<sup>6</sup> The phrase "if adequately treated" is an important consideration. Danziger and Kindwall indicate a mathematical method of evaluating what can be considered "adequate." In this paper the writer

therapy was also utilized when the patients were accessible, and an active employment program was followed whenever possible. The standard of rehabilitation used is rather high, and patients who were doing well at the 12-month and 24-month review periods were still not credited with rehabilitation if they had had a relapse during the preceding 6 months. Any evidence from letters or social reports that a patient was not doing satisfactorily excluded the patient from the rehabilitated group. This is comparable with the term "social remission" as used by some authors as there was no opportunity to examine the rehabilitated cases psychiatrically to determine the fine points of full recovery.

The author's technique brings about the improvement in the patients without an intermediate period of superimposed confusion and memory loss after the reorientation phase of the convulsion. This pattern of response is explained on the basis of brain facilitation (see Wilcox(4)).

These first admissions have been reviewed at 4 months (541 cases), 12 months (369 cases), and 24 months (341 cases) after the start of treatment for each patient. The median age at the start of treatment was 37 years for both the men and women, and the improved cases had the same median age as the others. This group of 541 cases was

attempted to apply their criteria very conservatively and then selected a group of 126 women who in general were adequately treated in order to see to what extent the mathematical predications could be substantiated. It must be readily admitted that many patients in this hospital did not receive an adequate trial of therapy. Insofar as it might be that they would have responded if they had received an adequate trial of treatment, it is not fair to the technique to retain them in the figures evaluating the results of the technique.

As will be seen in Table 14 the test series of women showed 63% ( $\pm 4.3\%$ ) rehabilitated at the 12-month review and 65% ( $\pm 4.3\%$ ) at the 24-month review. That difference is not statistically significant but most subgroups show a net gain at the 24-month review. Actually, for the whole group 7 (6%) lost the status of rehabilitation between the 12-month and the 24-month reviews, but another 10 (8%) gained that status during that period. As indicated in the text, rehabilitation is not considered as such unless that degree of adjustment has been maintained for at least 6 months continuously before the 12-month or the 24-month reviews, respectively. There may be an occasional patient classified as rehabilitated at both reviews who has suffered a brief relapse shortly after the 12-month review.

analyzed as to rehabilitation rates and number of treatments at the respective review periods (Table 8#). The women quite consistently were given more treatments than the men. This is known to be partly influenced by the doctors on the respective services, but it is fair to ask whether the women may require more treatments on the average. Our available information cannot answer this question satisfactorily. Forty five percent of these 541 first admissions were classified as rehabilitated at the 4-month review (Fig. 6 #). It should be noted that the standard for rehabilitation at the 4-month review is not quite the same as for the later reviews, because later we require a duration of rehabilitation of at least 6 months continuously up to the time of review. Obviously that is impossible for the 4-month review.

The men showed 58% ( $\pm 3.5\%$ ) rehabilitated at the 12- and 24-month reviews whereas the women showed 58% ( $\pm 3.8\%$ ) and 63% ( $\pm 3.9\%$ ), respectively (Figs. 7 # and 8 #). These standard errors of the per cents are large enough to make the significance of the differences doubtful.

The rehabilitation figures for these first admissions have been adjusted by excluding certain unrehabilitated cases as not having had "an adequate trial of treatment" (Table 8 #). This procedure can be determined only by examining the individuals thus excluded and by instituting a more "adequate" treatment program to see whether the percentages actually are thus increased. When the 178 hebephrenic, catatonic, and paranoid praecoxes are taken together, the percent rehabilitated at the 4-month review was 30% ( $\pm 3.4\%$ ). When the unrehabilitated cases who had only 1 to 10 treatment are excluded, an adjusted rate for those rehabilitated of 41% ( $\pm 4.3\%$ ) is obtained (Table 9 # and Fig. 9 #). By actual clinical test in the 41 selected women hebephrenic catatonic, and paranoid praecoxes analyzed in Table 12, the result of "adequate" treatment yielded 34% ( $\pm 5.9\%$ ) rehabilitated at the 4-month review.

Table 10 # shows the classification of the 541 first admissions as to diagnosis, 54 diagnoses being represented. Table 11 arranges the diagnoses into 5 groups. The patient

within each group responded to electroshock therapy with some similarity as shown in the rehabilitation rates at the 4-month review, 30% ( $\pm 3.5\%$ ) for hebephrenic, catatonic, and paranoid præcox group; 59% ( $\pm 5.5\%$ ) for the involutional and manic-depressive group; 72% ( $\pm 6.2\%$ ) for the psychoneuroses; 65% ( $\pm 4.3\%$ ) for the alcoholic, toxic, etc., group; and 21% ( $\pm 4.1\%$ ) for the central nervous system syphilis, old age psychosis, etc., group. The rehabilitation rate in the involutional and manic-depressive group

The author has not attempted to reclassify strictly his patients in this way, but actually Group A comes very close to Dedichen's Group I, but Group B contains cases which would be in Dedichen's Group II. Group D also contains a number of the Dedichen Group II cases.

The electroshock treatment program on the women's service has been intensive and fairly consistent since January 1, 1943. We selected for special study a group of 126 women who (1) started on electroshock

TABLE 11

THE 541 FIRST ADMISSIONS TREATED WITH ELECTROSHOCK ONLY, AND WITHIN 4 MONTHS AFTER ADMISSION; REHABILITATION RATES ACCORDING TO DIAGNOSTIC GROUPS AT THE 4-MONTH REVIEW

	No. of cases	Men and women		Standard error of the %
		No. rehabilitated	% rehabilitated	
A. Hebephrenic, catatonic, and paranoid præcoxes....	178	53	30	3.5
B. Involutional psychoses and manic-depressives.....	81	48	59	5.5
C. Psychoneuroses .....	53	38	72	6.2
D. Alcoholics, toxics, atypical præcoxes, undiagnosed psychoses, and non-psychotic conditions.....	121	79	65	4.3
E. Central nervous system syphilis, old age psychoses, psychopathic personalities, mental deficiencies, and miscellaneous organic psychoses.....	108	23	21	4.1
Total .....	541	241	45	2.1

is decreased by the presence of the involutional paranoids and the manic-depressive manics.

The dementia præcox—"other types" which include patients who are difficult to classify as definitely one or another of the subclasses, namely, hebephrenic, catatonic, or paranoid, respond better to electroshock therapy than those who can be more definitely classified. This can also be stated for the paranoid conditions and undiagnosed psychoses. Dedichen(5) in his excellent study of metrazol-treated cases compared to a control series of untreated cases in Norway chose to classify his patients into syndromes. Group I were the dementia præcox mixtures without affective admixtures. Group II were those with various admixtures of schizophrenic and manic-depressive or confusional factors. Group III were the relatively pure manic-depressive cases.

within 4 months after present admission; (2) had no other type of shock therapy at any time; (3) started on electroshock between January 1, 1943 and April 1, 1944, thus giving a 2-year review after the start of treatment; (4) were not direct transfers from other hospitals.

These women included the second or more admissions as well as the first admissions. Table 12 shows the diagnostic distribution, including 33 diagnoses, and the classification as to attack and duration of attack in relation to rehabilitation at the respective review periods. Unfortunately, this breaks down the statistics into very small units, each of which becomes unreliable statistically. However, most of the trends shown are consistent and thus gain significance as the cases are grouped into larger groups as seen later in Table 14. In most groups there is some increase in the number rehabilitated at the

TABLE 12

THE 126 WOMEN RECENT ADMISSIONS TREATED WITH ELECTROSHOCK ONLY, AND WITHIN 4 MONTH AFTER ADMISSION, STARTED ON TREATMENT BETWEEN JANUARY 1, 1943 AND APRIL 1, 1944;  
REHABILITATION RELATED TO DIAGNOSTIC GROUPS, ATTACK, AND DURATION OF  
ATTACK AT SUCCESSIVE REVIEW PERIODS

	No. of cases	Number rehabilitated		
		4-mo. review	12-mo. review	24-mo. review
<b>Dementia præcox, hebephrenic</b>				
First attack, duration 0-1 yr.....	1	1	1	1
First attack, duration longer than 1 yr.....	3	0	0	0
Second or more attack, duration 0-1 yr.....	1	0	1	1
Second or more attack, duration longer than 1 yr.....	4	1	2	2
Total .....	9	2 (22%) (15)	4 (44%) (18)	4 (44%) (18)
Standard error of the %.....				
<b>Dementia præcox, catatonic</b>				
First attack, duration 0-1 yr.....	4	3	4	4
First attack, duration longer than 1 yr.....	8	3	2	3
Second or more attack, duration 0-1 yr.....	2	0	2	2
Second or more attack, duration longer than 1 yr.....	1	0	0	0
Total .....	15	6 (40%) (13)	8 (53%) (13)	9 (60%) (13)
Standard error of the %.....				
<b>Dementia præcox, paranoid</b>				
First attack, duration 0-1 yr.....	6	2	3	3
First attack, duration longer than 1 yr.....	9	3	4	5
Second or more attack, duration 0-1 yr.....	1	0	0	1
Second or more attack, duration longer than 1 yr.....	1	1	0	1
Total .....	17	6 (37%) (12)	7 (41%) (12)	10 (59%) (12)
Standard error of the %.....				
<b>Manic-depressive, manic</b>				
First attack, duration 0-1 yr.....	3	1	2	2
First attack, duration longer than 1 yr.....	1	0	0	0
Second or more attack, duration 0-1 yr.....	7	3	5	5
Second or more attack, duration longer than 1 yr.....	1	1	0	0
Total .....	12	5 (42%) (15)	7 (58%) (15)	7 (58%) (15)
Standard error of the %.....				
<b>Manic-depressive, depressed</b>				
First attack, duration 0-1 yr.....	1	0	0	0
First attack, duration longer than 1 yr.....	1	1	1	1
Second or more attack, duration 0-1 yr.....	5	4	4	4
Second or more attack, duration longer than 1 yr.....	1	0	1	1
Total .....	8	5 (63%) (18)	6 (75%) (16)	6 (75%) (16)
Standard error of the %.....				
<b>Manic-depressive, other types, and involutionals (6 diagnoses)*</b>				
First attack, duration 0-1 yr.....	2	0	1	1
First attack, duration longer than 1 yr.....	3	2	3	2
Second or more attack, duration 0-1 yr.....	4	2	4	3
Second or more attack, duration longer than 1 yr.....	2	1	1	2
Total .....	11	5 (45%) (16)	9 (81%) (12)	8 (72%) (15)
Standard error of the %.....				

TABLE 12 (CON'T)

TABLE 12 (CON'T)

	No. of cases	Number rehabilitated		
		4-mo. review	12-mo. review	24-mo. review
<b>Psychoneurosis (7 diagnoses)†</b>				
First attack, duration 0-1 yr.....	5	4	4	4
First attack, duration longer than 1 yr.....	12	9	9	11
Second or more attack, duration 0-1 yr.....	2	2	2	1
Second or more attack, duration longer than 1 yr.	1	0	0	1
Total .....	20	15 (75%)	15 (75%)	17 (85%)
Standard error of the %.....		(10)	(10)	(8)
<b>Miscellaneous (15 diagnoses)‡</b>				
First attack, duration 0-1 yr.....	11	8	10	10
First attack, duration longer than 1 yr.....	9	6	7	5
Second or more attack, duration 0-1 yr.....	11	6	5	5
Second or more attack, duration longer than 1 yr.	3	1	1	1
Total .....	34	21 (62%)	23 (68%)	21 (62%)
Standard error of the %.....		(8)	(8)	(8)
<b>All diagnoses (126 women) (33 diagnoses)</b>				
First attack, duration 0-1 yr.....	33	19 (58%)	25 (76%)	25 (76%)
First attack, duration longer than 1 yr.....	46	24 (52%)	26 (56%)	27 (59%)
Second or more attack, duration 0-1 yr.....	33	17 (52%)	23 (70%)	22 (67%)
Second or more attack, duration longer than 1 yr.	14	5 (36%)	5 (36%)	8 (57%)
Total .....	126	65 (52%)	79 (63%)	82 (65%)
Standard error of the %.....		(4.5)	(4.3)	(4.3)

\* This group includes 3 involuntional melancholia, 2 involuntional paranoid, 1 involuntional psychosis—other type, 2 manic-depressive, circular, 2 manic-depressive, mixed, and 1 manic-depressive, other type.

† The psychoneuroses include 2 psychasthenia, 1 neurasthenia, 6 hypochondriasis, 2 reactive depression, 3 anxiety state, 1 anorexia nervosa, and 5 mixed psychoneurosis.

‡ The miscellaneous group includes 1 general paresis, 1 postinfectious psychosis, 1 psychosis with glandular disorder, 2 psychosis with other somatic disease, 1 psychosis with other diseases of the brain and nervous system, 5 psychosis with cerebral arteriosclerosis, 1 dementia præcox—undifferentiated, 5 dementia præcox—other types, 2 paratoid condition, 2 psychopathic personality with psychosis, 4 psychopathic personality without psychosis, 3 mental deficiency with psychosis, 2 mental deficiency without psychosis, 1 psychosis with drug addiction, and 3 undiagnosed psychosis.

24-month review compared to that at the 12-month review. This is significantly noticeable for the dementia præcox, paranoids; namely, 41% at the 12-month review and 59% at the 24-month review. The manic-depressive, "other types," and involuntional, and the miscellaneous groups, show a slight decrease at the 24-month review compared to the 12-month review.

Analysis of the age distribution at the start of treatment in relation to rehabilitation at the 4-month review shows that, although the median age of the unrehabilitated women was 39 years compared to 33 years for the rehabilitated women, the middle 50% range of the 2 groups is nearly identical (Table 13 #).

Table 14 and Fig. 10 show the cumulative rehabilitation rates according to the cumulative number of treatments at the various review periods. The over-all rehabilitation rates are 52%, 63%, and 65% for the re-

spective periods. It is apparent that the gain for the group as a whole is not significant between the first and second year after the start of treatment. There was some shift of individuals during that period, but the relapsing patients nearly counterbalanced those who went on to rehabilitation.

The 12 unrehabilitated cases at the 24-month review who received only 1 to 10 treatments included 3 patients who, in spite of treatment, died of an acute fulminating psychosis; 1 hebephrenic who was transferred to another institution; 1 mental deficiency without psychosis and 2 paratoid præcokes with mental deficiency who remained in the hospital because of their mental deficiency; 1 general parietic who did not show a favorable response to 4 treatments; 1 chronic paranoid præcox who was given a trial of 8 treatments without improvement; 2 psychopathic personalities without psychosis who remained in the hospital because

TABLE 14

THE 126 WOMEN RECENT ADMISSIONS TREATED WITH ELECTROSHOCK ONLY, AND WITHIN 4 MONTHS AFTER ADMISSION, STARTED ON TREATMENT BETWEEN JANUARY 1, 1943 AND APRIL 1, 1944;  
CUMULATIVE REHABILITATION RATES RELATED TO THE CUMULATIVE  
NUMBER OF TREATMENTS

	Cumulative number of treatments up to the date of review						Total
	1-5	1-10	1-20	1-40	(Dead)		
<i>4-Month review</i>							
<i>126 Women</i>							
Cumulative No. of cases.....	37	76	109	126	(4)		126
Cumulative No. rehabilitated.....	25	51	63	65			65
Cumulative % rehabilitated.....	20%	40%	50%	52%			52%
See Fig. 10, Curve A							
Standard error of the %.....	3.6	4.4	4.5	4.5			4.5
<i>12-Month review</i>							
<i>126 Women</i>							
Cumulative No. of cases.....	34	62	99	124	(4)		126
Cumulative No. rehabilitated.....	26	47	69	78			79
Cumulative % rehabilitated.....	21%	37%	55%	62%			63%
See Fig. 10, Curve B							
Standard error of the %.....	3.6	4.3	4.4	4.3			4.3
<i>24-Month review</i>							
<i>126 Women</i>							
Cumulative No. of cases.....	33	56	73	118	(5)		126
Cumulative No. rehabilitated.....	25	44	69	81			82
Cumulative % rehabilitated.....	20%	35%	55%	64%			65%
See Fig. 10, Curve C							
Standard error of the %.....	3.6	4.3	4.4	4.3			4.3
<i>24-Month review</i>							
<i>First attack, duration 0-1 yr.</i>							
<i>33 Women</i>							
Cumulative No. of cases.....	10	17	27	31			33
Cumulative No. rehabilitated.....	8	14	22	25			25
Cumulative % rehabilitated.....	24%	42%	67%	76%			76%
See Fig. 11, Curve A							
Standard error of the %.....	7.5	8.7	8.3	7.5			7.5
<i>First attack, duration longer than 1 yr.</i>							
<i>46 Women</i>							
Cumulative No. of cases.....	11	22	33	45	(2)		46
Cumulative No. rehabilitated.....	7	16	24	27			27
Cumulative % rehabilitated.....	15%	35%	52%	59%			59%
See Fig. 11, Curve B							
Standard error of the %.....	5.3	7.1	7.6	7.5			7.5
<i>Second or more attack, duration 0-1 yr.</i>							
<i>33 Women</i>							
Cumulative No. of cases.....	10	15	27	30	(2)		33
Cumulative No. rehabilitated.....	8	12	19	21			22
Cumulative % rehabilitated.....	24%	36%	58%	64%			67%
See Fig. 11, Curve C							
Standard error of the %.....	7.5	8.5	8.7	8.5			8.3
<i>Second or more attack, duration longer than 1 yr.</i>							
<i>14 Women</i>							
Cumulative No. of cases.....	2	2	6	12	(1)		14
Cumulative No. rehabilitated.....	2	2	4	8			8
Cumulative % rehabilitated.....	14%	14%	29%	57%			57%
See Fig. 11, Curve D							
Standard error of the %.....	9.3	9.3	12.6	13.7			13.7

of their psychopathic personalities; and 1 elderly anxiety state who made a partial adjustment with 7 treatments. It is unlikely that any of these patients would have been rehabilitated at the 24-month review even if they had been given a large number of treatments, and therefore it is not legitimate to exclude them from the statistics.

Table 14 also shows the cumulative rehabilitation rates at the 24-month review according to attack and duration of attack. A conservative plan has been used in estimating the number and duration of the attack. Unless a period of good social adjustment lasting at least 6 months has been enjoyed, that

view periods, according to attack and duration of attacks, comparing the rehabilitated cases with the unrehabilitated cases. This table shows a consistent trend for the unrehabilitated patients to be given more treatments than the rehabilitated ones. This is a good measure of the persistence in the treatment program in an attempt to bring about rehabilitation in the resistant cases. A number of patients for whom the usual number of treatments was insufficient did respond to this persistent therapy.

In this series practically all treatments

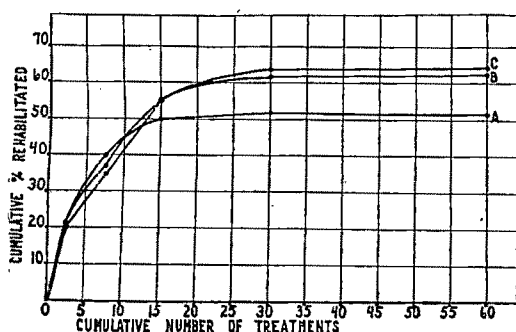


FIG. 10.—125 women recent admissions—cumulative rehabilitation rates related to cumulative number of treatments at various review periods. A. 4-month review. B. 12-month review. C. 24-month review. See Table 14.

patient is considered as still continuing with the attack which may have been in process before a briefer period of good adjustment. The onset of the attack is taken to be the time of onset of the first mental symptoms as realized in retrospect by the informants. This classification of the cases reveals a tendency for first attacks with duration of less than 1 year to respond best to treatment; namely, 76% rehabilitated at the 24-month review. However, there also appears to be a better response in a second or more attack of short duration than in a first attack of long duration. The rehabilitation rates are 76% for the first attack, duration 0 to 1 year; 59% for the first attack, duration longer; 67% for the second or more attack, duration 0 to 1 year; and 57% for second or more attack, duration longer (see Fig. 11).

Table 15 shows the distribution of the number of treatments at the respective re-

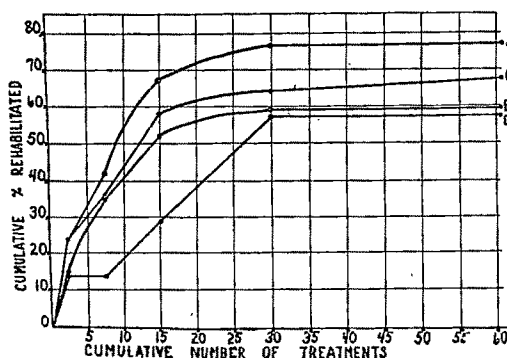


FIG. 11.—126 women recent admissions—cumulative rehabilitation rates related to cumulative number of treatments at 24-month review. A. First attack, duration 0-1 year. B. First attack, duration longer than 1 year. C. Second or more attack, duration 0-1 year. D. Second or more attack, duration longer than 1 year. See Table 14.

were grand-mal treatments. Somerfield-Ziskind and Ziskind(6) had the impression that the occurrence of a few subconvulsive treatments impaired the prognosis. Their contention influenced the program of the author, but it is not possible to evaluate critically this point at this time. In this series there was no apparent detrimental effect in the small number who did have one or two subconvulsive treatments in addition to their grand-mal treatments. Some of the treatments were preceded by intravenous sodium thioethylamyl or by intravenous sodium amylal, and other variations in procedure were tried; but it appears that the most important factor was the production of grand-mal treatments as frequently as indicated by the patient's clinical condition. This meant that most patients were started out on a daily treatment program and the frequency was decreased

TABLE 15

THE 126 WOMEN RECENT ADMISSIONS TREATED WITH ELECTROSHOCK ONLY, AND WITHIN 4 MONTHS AFTER ADMISSION, STARTED ON TREATMENT BETWEEN JANUARY 1, 1943 AND APRIL 1, 1944;  
DISTRIBUTION OF TREATMENTS AT VARIOUS REVIEW PERIODS ACCORDING TO ATTACK AND DURATION OF ATTACK COMPARING REHABILITATED AND UNREHABILITATED CASES

	Number of treatments		
	Median	Middle 50%	Total range
<i>4-Month review</i>			
<i>Rehabilitated (65 women)</i>			
First attack, duration 0-1 yr.....	7	3.5-11.5	1-26
First attack, duration longer than 1 yr.....	6	5 - 9.5	3-19
Second or more attack, duration 0-1 yr.....	6	3 -10	1-14
Second or more attack, duration longer than 1 yr....	7	3 - 9	3-10
<i>Others (61 women)</i>			
First attack, duration 0-1 yr.....	9.5	5 -14	3-34
First attack, duration longer than 1 yr.....	14.5	8 -21	4-33
Second or more attack, duration 0-1 yr.....	15	8 -21	3-34
Second or more attack, duration longer than 1 yr....	16	13 -23	9-38
<i>12-Month review</i>			
<i>Rehabilitated (79 women)</i>			
First attack, duration 0-1 yr.....	8	4 -14	1-37
First attack, duration longer than 1 yr.....	7	5 -11	3-21
Second or more attack, duration 0-1 yr.....	10	4 -19	1-47
Second or more attack, duration longer than 1 yr....	16	3 -18	3-27
<i>Others (47 women)</i>			
First attack, duration 0-1 yr.....	9	6 -18.5	5-37
First attack, duration longer than 1 yr.....	18	6 -28	1-43
Second or more attack, duration 0-1 yr.....	11	6 -16	4-38
Second or more attack, duration longer than 1 yr....	24	16 -31	13-40
<i>24-Month review</i>			
<i>Rehabilitated (82 women)</i>			
First attack, duration 0-1 yr.....	8	4 -14	1-26
First attack, duration longer than 1 yr.....	8	5.5-17.5	3-36
Second or more attack, duration 0-1 yr.....	10	4 -19	1-47
Second or more attack, duration longer than 1 yr....	21	8 -26	3-31
<i>Others (44 women)</i>			
First attack, duration 0-1 yr.....	13.5	6 -27.5	5-43
First attack, duration longer than 1 yr.....	22	8 -29.5	1-51
Second or more attack, duration 0-1 yr.....	14	8.5-23	4-56
Second or more attack, duration longer than 1 yr....	23.5	16 -44	13-47
<i>24-Month review</i>			
<i>Dementia praecox, hebephrenic</i>			
Rehabilitated (4 women).....	11.5	4 -19	3-27
Others (3 women).....	25	13 -42	8-44
Total .....	19	8 -27	3-44
<i>Dementia praecox, catatonic</i>			
Rehabilitated (9 women).....	14	7 -31	2-47
Others (6 women).....	43.5	26 -47	1-51
Total .....	31	9 -45	1-51
<i>Dementia praecox, paranoid</i>			
Rehabilitated (10 women).....	19	14 -21	8-36
Others (7 women).....	15	6.5-19	4-33
Total .....	19	10 -21	4-36



as the patient showed signs of response to the treatments.

The significance of the results obtained in our total series is confused by the various spontaneous improvement rates for different diagnostic groups. The statistical results with alcoholics are good, but spontaneous partial adjustment is high for short periods. Furthermore, some patients such as psychopathic personalities with psychosis and mental deficiency with psychosis may show marked improvement in their psychoses but still may not be rehabilitated because of the handicap of the underlying psychopathic personality or mental deficiency. In CNS syphilis we have occasionally seen marked benefit so that we feel it is worth a trial, but only one-third of those treated with electroshock were rehabilitated within one year. They were also given intensive antiluetic therapy.

In general it can be said that the early cases with a variety of symptoms have a good prognosis. We have found that psychoses with infectious diseases and certain similar conditions respond well to electroshock therapy. We have had gratifying results in relieving some of the elderly people of their distressing symptoms even though the organic changes remain a handicap. For example, the impairment of recent memory improves only as much as can be accounted for by improved attention.

There is a high initial rate of improvement among the involuntals and the manic-depressives, but the evidence is confused by the fairly high rate of spontaneous improvement over a period of months. Clinically there is clear evidence that the course of the depressions is shortened and most manics are made more manageable during their manic period. Some of these patients have relapsing tendencies so that treatments have to be repeated from time to time. Such a program makes it important that the treatments not cause any cumulative brain damage.

Although dementia præcox, hebephrenic cases are numerous among the chronic hospital population, only 6% of the first admissions were so classified. Most cases so diagnosed at our hospital have had a rather prolonged history of early psychotic symptoms before entering the hospital (see Table 12). It is my impression that this is a diag-

nosis that usually implies that the illness has already become chronic. It is possible that with early adequate treatment we are preventing the development of some cases of hebephrenia. In review of these cases, those who responded well were not as classical in their symptoms as those who did not.

The so-called dementia præcox, catatonic type, includes a complex group of psychotic patients. Some of them respond well to treatment, but others are very resistant. Here again it appears that the classical catatonic stupor may quickly become a chronic pattern. In the acute fulminating cases we have had a number of spectacular recoveries, but, once the catatonic under-activity persists after mental contact with the environment has been reestablished to some extent, the pattern is very resistant to treatment. Table 15 shows that the catatonic patients were given the largest number of treatments; namely, a median of 31 treatments and a total range of 1 to 51 treatments.

About 40% of our dementia præcox, paranoid cases when treated promptly are home, fairly well adjusted, within a year after the start of treatment, but some of these do not have adequate insight into their delusions. However, some of these cases do make remarkable improvement with the development of clear insight. Some attain this degree of improvement even after a long relapsing course, if their relapses are persistently treated, bringing the rehabilitation rate to about 60% at the 24-month review.

The psychoneuroses who come to our hospital usually have depressive features and respond well to treatment. Those with obsessive ideas are long-range problems. The brain facilitation from the treatments is a valuable adjunct to the treatment program, but a good deal of psychotherapy is necessary over a long period of time in order to get good results. As a group, about 75% of our psychoneurotics are home, improved, within 4 months after the start of treatment.

Nearly 800 other treated patients have been coded and analyzed. These readmissions, transfers, cases of delayed treatment, and patients who were also given other types of shock therapy respond to treatment variably, according to whether they have become more like the most chronic patients or

whether they are still reacting more like the early cases.

### CONCLUSIONS

1. Forty percent of the most chronic patients showed significant improvement in ward behavior if adequately and repeatedly treated with suitable type of electroshock therapy. Relapses must be treated whenever they occur over months and years.

2. At least 60% of early cases, aged 60 or under, were rehabilitated within 1 year when adequately treated and 65% by the end of the second year after the start of treatment.

3. Adequate treatment means intensive treatment until the expected improvement has occurred and intensive treatment of relapses when they occur. No patient, otherwise suitable who still is not rehabilitated after 1 year, has had an adequate trial of treatment with less than 20 treatments.

4. An ideal therapy is one which achieves beneficial results without causing accumulating brain damage, thus permitting its use repeatedly for years if necessary.

5. This ideal is approached by the relatively low intensity 60-cycle pulsating direct

current used in the treatment of the patient reviewed in this paper. This technique also has been accompanied by an exceptional low percentage of skeletal complications.

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## A STUDY OF WILLIAM HEIRENS

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During the year 1945 and early in 1946 the citizens of Chicago were horrified by newspaper reports of three atrocious murders and the beating of a nurse. All the murders followed a pattern, in that they occurred in small apartments and no evidence of burglary or other apparent motivation was found. In one apartment, in which an ex-Wave was brutally killed, appeared in lip stick on the wall, "For heaven's sake catch me before I kill more; I cannot control myself." In another, a child of six years was kidnapped and her body dismembered and thrown into various sewers and drains. A ransom note was written and delivered to her parents. In addition, hundreds of burglaries were reported in a residential area in the north side of Chicago.

On June 26, 1946, a young man was intercepted after an attempt at burglary. In endeavoring to make his getaway he was hit on the head with a flower pot and finally subdued by a policeman off duty, who was returning from a nearby bathing beach. A routine arrest followed, until an alert police official noticed the similarity of a curve flourish in his signature and the ransom note. By this time several days had elapsed and no formal charge had been booked against the youth. He was, it developed, a 17-year-old University of Chicago student. He was being held in the hospital of the House of Correction in Chicago, suffering from scalp wounds. Here he refused to answer questions, and mimicked his questioners. Saturday afternoon, June 29, 1946, he was seen by Drs. Francis J. Gerty and William H. Haines for an opinion of his mental status. It was thought that he was malingering. Another interview was arranged and he was examined the same night by Drs. Roy R. Grinker and William H.

Haines, at which time a conclusion was reached that he was malingering. During the following week he made a full confession to his attorneys regarding the atrocities and brutal murders.

In examining his record it was found that he had been arrested for burglary at the ages of 13 and 15. Finger prints were not taken because he was held by the Juvenile Court authorities. He was also arrested for carrying a gun, while returning from rifle practice at the university. This arrest occurred after the perpetration of the atrocities. The case was dismissed and he was told to register his gun.

While in jail awaiting trial, three notes he had written were intercepted. In one of these he denied all the crimes, and in the others—to his parents—he admitted the burglaries.

A psychiatric examination was ordered by the court before trial, at the request of his attorneys and the state's attorney. This commission consisted of Dr. Harry R. Hoffman, state alienist and director of the Neuropsychiatric Institute; Dr. William H. Haines, director of the Behavior Clinic of the Criminal Court of Cook County, and a third member to be from outside the State of Illinois. Dr. Foster Kennedy, director of the neurological service at Bellevue Hospital in New York City and ex-president of the American Neurological Association, was selected. Dr. Francis J. Gerty, head of the department of Psychiatry at the University of Illinois, and Dr. Francis J. Braceland, ex-chief of Psychiatry in the Navy and now at Mayo Clinic in Rochester, Minn., were also contacted, but were unable to serve because of other commitments.

The Supreme Court in Illinois had handed down opinions regarding the mental status of defendants at the time of going to trial, to wit: "BEFORE TRIAL.—He is not considered a lunatic or insane if he is capable of understanding the nature and object of the proceedings against him and if he rightly comprehends his own condition in reference

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to such proceedings and has sufficient mind to conduct his defense in a rational or reasonable manner, although upon some other subjects his mind may be deranged or unsound."<sup>4</sup> The examiners were agreed in their opinion that the defendant was able to stand trial and submitted a joint report of 32 pages.<sup>5</sup> In this report to the court many of Heirens' answers were given verbatim. These have been condensed in this article to conserve space.

#### REPORT TO THE COURT DATED SEPTEMBER 3, 1946

William Heirens was examined pursuant to an order of the Honorable Harold G. Ward, Chief Justice of the Criminal Court of Cook County. This order was entered after a conference between the state's attorney and the counsel for the defense. We were asked to make a comprehensive report. To this end we were instructed to obtain all necessary expert advice, and we were provided by both prosecution and defense with all documents pertinent to the case in their possession.

*This patient, in our opinion, is not suffering from any psychosis, nor is he mentally retarded: he has average intelligence. He has a deep sexual perversion and is emotionally insensitive and unstable. He has sufficient intelligence to understand the nature and object of the proceedings against him. He rightly comprehends his own position in regard to these proceedings and has sufficient mind to conduct his defense in a rational and reasonable manner. He has repeatedly stated to us that he has always been aware of the nature and purpose of his acts, which acts are the basis of the present proceedings against him.*

Our study has included a careful survey by the social service department of the patient's early life and environment. We have interviewed the patient's parents and his roommate at the university. We have read the patient's statements to the state's attorney regarding his acts charged in the indictments

against him. We have spent with him in close investigation, singly or together, with the presence of a stenographer and without about 5 or 6 hours a day since the 12th of August. These investigations were conducted privately in the quiet of the chapel of the Cook County Jail.

In addition, he was subjected to a series of carefully selected and conducted psychological tests calculated to reveal trends both conscious and underlying consciousness. The quality of intellect was carefully tested and he was found to have an intelligence quotient of 110, an average figure. The Rorschach test was used and failed to reveal any psychosis.

At the Illinois Neuropsychiatric Institute several electroencephalographic tracings were taken and found completely normal. X-ray studies of skull and spinal column were normal. The basal metabolic rate was normal. A complete blood study, insulin tolerance and urine test proved normal. The spinal fluid was normal, as were also the Wassermann and Kahn tests of the blood.

We have examined his notebooks made during the past three years. We have studied the post-mortem reports of the murders.

#### Social History

The patient is a 17½-year-old white boy born in Evanston, Ill., of native-born parents of Luxemburg descent. The family history, as given, is negative as to insanity, epilepsy, alcoholism or mental defectiveness. The father grew up in a floral business with his father, and opened a store and conservatory of his own soon after marriage, flower arrangements being his specialty. The family occupied a flat in connection with the store. With the depression, the business failed and although several attempts were made to reestablish themselves in different locations, none was successful. After a period of irregular employment, the father secured work on the police force of Carnegie Steel Company, about 8 years ago, and has now worked up to the position of special investigator. In addition, he works several evenings with the Lincolnwood Village police force. The mother has worked much of the time since marriage, both to supplement the income and because she enjoyed it, working in their own

<sup>4</sup> Insanity and the Criminal, William H. Haines, M.D., and Harry R. Hoffman, M.D., Medical Clinics of North America, January 1945.

<sup>5</sup> To be published in full in the Journal of Criminal Law and Criminology.

and other forist shops, in a bakery as a fancy pastry maker, and more recently designing and executing custom made clothes. The mother handles the family finances. The patient expressed some concern over his mother's work, feeling it was done to pay his school tuition, but she preferred to do so and employ someone to do the housecleaning, etc.

The patient is the elder of two brothers. Family religion is Roman Catholic. Early in the pregnancy with the patient, the mother feared she would miscarry. Labor was long (62 hours) and delivery difficult with high forceps employed. The patient weighed 8 pounds and 5 ounces and was 24 inches long at birth. Breast feedings were inadequate and extremely painful to the mother and were supplemented by bottle feedings almost from the beginning. Weaning from the breast was completed by age of one month. He presented a feeding problem from the beginning—he "vomited in a gush" after every feeding and was sickly and severely underweight for the first 3 months. Thereafter under different care and diet he began to gain weight. Teething presented no problem. The ages of walking and talking are unknown; the mother reports "the usual age." The mother reported that toilet training was completed early; after 8 months there was no nocturnal wetting and by one year, daytime bladder and bowel control had been established. No relapses were reported.

At 7 months while unattended he fell from his buggy to a cement basement area 12 feet below, injuring his head. He was not unconscious when his mother found him. At age 8 or 9 he fell from a trapeze and sustained a compound fracture of the bones of the right arm, necessitating an open reduction. When about 12, he fell down some cement stairs at school, cutting his head over the eye. Patient fainted then. At the age of 8, he had a tonsillectomy with severe hemorrhage and some complications. He also had chicken pox and measles as a child. In the summer of 1942 and again in the spring of 1946, he complained of severe headaches. Otherwise the health history is negative.

He was a solitary child and youth, sensitive but difficult to know. Apparently no one ever had a close or confidential relationship with him. Certainly his parents did not. As a child he was with his brother a good deal

and had to fight his battles for him. He never had any real friends and preferred to be alone. In the 7th and 8th grades excessive day dreaming was reported. He had some mechanical interests and considerable skill, according to the parents, repairing electric motors, repairing or making radios from old parts. He was interested in collecting and recently had a considerable coin collection. Very early he was eager to earn his own money—worked delivering orders for a food store the summer he was 12, delivered for a liquor store the summer he was 14, and worked in the steel mills with his father the summers of 1944 and 1945. He was very frugal with his money, spent little on himself, just saved it. His only "splurge" was in gifts for the family, buying expensive presents out of proportion to his earnings. Very early he learned not to whimper or cry when hurt and could endure considerable physical pain.

He attended public school kindergarten for a few months at age 5 and entered parochial school at 6. He attended three parochial elementary schools, as the family moved, and graduated from 8th grade (receiving his diploma *in absentia* since he was then in the Juvenile Detention Home) at age of 13.

In June, 1942, at the age of 13, he was first apprehended by the police trying to break into a basement storeroom. Subsequently he admitted 9 burglaries within the preceding 6 months. Following the juvenile court hearing, he was committed to Gibault School for Boys and remained there from July 5, 1942 to June 4, 1943. Except for an attempt to run home 3 weeks after commitment, he presented no discipline problem and exteriorly was a conformist according to report received. He was obedient and cooperative, with good attitude toward authority. He completed his first year of high school here with scholastic averages all in the 80's. He was quiet and serious, "definitely an introvert," and would often be found away from campus completely alone. He had few friends and preferred to be by himself. He was not interested in athletics; team games especially did not appeal to him. He expressed a good attitude toward religious obligations, frequently took Holy Communion, went to confession less regularly at school than

lately. He did not want to know anyone intimately.

Two months after his return from Gibault, he was again arrested, charged with burglary. In Juvenile Court the case was heard before a visiting judge who acceded to the family's wishes. The patient was placed on probation to go to St. Bede's Academy at Peru, Illinois, where he remained from September, 1943 to May 27, 1945, but was at home for summer vacation in 1944 and 1945. He completed 2d and 3d years of high school there. This school report showed grades of "A" and "B" in all subjects for his sophomore year, from "A" to "F" (English) in junior year. His adjustment was good, no discipline problem, he had no confidential relationship with anyone and preferred to be alone. Probation was terminated January 19, 1945.

In September, 1945 he entered the University of Chicago, taking placement tests, remaining there until his apprehension during the summer quarter of 1946. His scholastic record there was average and below. He had many absences from academic and physical education classes. According to the mother, he was active in the Calvert Club (a Catholic organization, social and religious). He seemed to have at least a superficial relationship with a few students and finally began to have a few "dates" with girls, though with no close friends.

According to the parents, the patient never displayed any of the usual sexual curiosity as a child nor displayed any jealousy of his brother three years younger. No sex instructions were given by the parents. At the age of about 13, there was an incident of sex play which patient witnessed in the boys' toilet at school and reported to his mother, at which time he was warned about venereal disease. This was a few months before the first known burglary. The parents were unaware of his delinquencies until after he was apprehended, but since his earlier court appearance have been constantly fearful of a repetition, though trying to trust him.

#### *Physical Examination*

The patient was carefully examined physically. He is a well built young man weighing 159 pounds. There were no deformities excepting a scar on right forearm, the result of a compound fracture when aged about 10. No evidence was found of any structural

abnormality in the central, autonomic or peripheral nervous systems. The hands were moist and over-cold and without tremor. There was a remarkable reduction to the perception of pin pricks, however strong, as "pain." This was present all over the body with the exception of the glans penis. Sharp pin pricks inside the nose on the mucous membrane and the soles of the feet were denied as being painful and no motion of withdrawal was made there or elsewhere. This was also true as regards the mucous membrane of the lip, and the scrotum and body of the penis. A sharp needle could be pressed more than four millimeters under the nails without inducing pain or defense withdrawal movements. As the sensory examination proceeded, this "analgesic cloak" deepened in quality under suggestion, so that below a sharp circle round both arms level with the upper edge of the anterior wall of the armpits he became unable to feel pin prick as other than "not blunt." The corneal reflexes at first were greatly reduced and at the close of this examination had disappeared so that it became possible to tap the eyeballs with a closed safety pin without his winking or giving any motor sign of sensation. Deep pain produced by pressure on calf muscles and Achilles tendons and the testes was also reduced. As regards his ability to perceive light touch, he missed two out of three stimulations in scattered distribution over the body. The perception of vibration and the other forms of sensation were normal. The visual fields were found to narrow progressively as the test continued, so that they became finally almost pin-point. This phenomenon is known as "a spiral" or "helicoid" visual field, and is a positive objective indication of profound hysteria.

This striking reduction of power to appreciate painful stimulation as such, together with its remarkable deepening as the result of suggestion, is to us a clear proof of the patient's hysterical personality.

The blood pressure, heart, lungs and abdomen were normal. He is powerfully built with fine muscular development; he excelled in wrestling.

#### *Psychiatric Examination*

The psychiatric interviews, to which allusion has already been made, consisted in

quiet, persistent questioning, while noting the answer and its emotional accompaniment. He was informed of his constitutional rights and in reply promised his full cooperation. His statements to the state's attorney are on record and indeed have been published. The patient was, of course, taken over every point of these. We shall try here not to repeat that information but to give enough of our great mass of material to display new evidence and new viewpoints on the dynamic forces at work in this patient.

We propose now to give as briefly as possible an account of the significant actions and emotional reactions of this patient insofar as they could be discovered. When quotation marks are used, the quotations will be patient's own words.

When aged 9, the patient began to be interested in "the feeling and color" and then "the stealing" of women's underclothing. He began to take these at first from clothes lines, then from basements, and later from strange houses, the doors of which he found open or ajar. Dresses or other articles of women's apparel made no appeal to him nor was he interested in the undergarments of his immediate family. Having secured a pair of women's panties or drawers, he would take it to a basement or home, put it on, experience excitement and sexual completion. Most garments he then threw away, some he replaced, and some he hoarded in his grandmother's attic.

We believed it important, if possible, by objective evidence to prove the truth of his statement of fetishism. An investigation brought to light, in the spot he had described, "a cardboard box" containing some 40 pairs of women's old, used panties or drawers, mostly made of rayon and brightly colored.

When 12 or 13 years of age, he secured the desired garments by going into houses through windows. This furnished more excitement. After three such expeditions, he took objects ("guns or money") other than underclothes; a change which was again an added stimulation. "It seemed sort of foolish to break in and not take anything." When he had thus changed his objective, the interest in underclothes largely evaporated and was replaced by the excitement experienced on "making an entrance" through the window. Often he would struggle against his desire to leave his room at night, but

when he did leave it was for the purpose of committing burglaries. He had sexual excitement or an erection at the sight of an open window at the place to be burglarized. Going through the window he had an emission. Later it took several entrances to produce the emission. If startled in the act of burglarizing he immediately killed, stating, "It was the noise that set me off, I believe. I must have been in a high tension and the least bit of noise would disturb me in that manner." In describing the disposal of the 6-year-old Degnan girl's body, he said, "It is just like a floor with holes in it. I've tried to look through the holes to see what is down below. There is not enough holes to find out"—referring to his memory. His phrase "sexual excitement" was expanded: "I nearly always have to urinate or have a bowel movement—it always preceded the urge; when I first noticed it, I was in the basement and I had a bowel movement." Often when sexual completion occurred in the entered room it was accompanied or preceded by defecation or urination, or both. He would leave the consequences in the room or would find them later in his own clothes. After an emission, he would always leave the entered house without taking anything with him. After assaulting Miss Peterson, the nurse, he had an orgasm and without striking her again he left and returned to his room at the university. He later returned to the Peterson apartment, administered first aid, and tried by telephone to get help for her.

After an emission was the only time he felt he had done wrong. We believe, from other statements, by this remark he meant that only immediately after orgasm did he suffer from the pang of conscience. This compelling "urge" had clearly a dynamic sexual origin, and the emptying of bowel and bladder was due to an overflow spinal reflex; so we asked him had he never relieved this tension by manual manipulation. On one occasion he indignantly denied even the attempt despite all his experience with underclothes, occurring as often as four times a week. Later he said he tried this method twice without success. In the same manner, he at first denied ever having attempted any sex play with girls. Two days later with one of his rare shows of emotion he said, looking much ashamed, that twice,

later correcting himself to eight times, he had touched girls "on the breasts" and then pressed "on the leg." Always, having done this, he would immediately burst into tears and "be upset and unable to sleep." It should be noticed that no uncomfortable emotions followed either burglaries or murders. He forcibly denied ever having made any more intimate advances, except that he "kissed them" sometimes. "They wanted to kiss; I didn't."

It was clear that normal sex stimulation and experience were unpleasant, indeed "repulsive," to him, and these efforts afterward created in him a negative emotional state. He found them improper in the conduct of others; he never spoke of them except in condemnation, as for example of the young men in the university who had brought a girl into their rooms at night.

He was interested in books on sex and crime. "I read around the subject of masochism, fetishism, sadism, flagellation, also Kraft-Ebbing and dreams, some parts of Freud." At one time he said he could not read Freud because it was "dirty"—about sex. Asked which was most obnoxious, sex, burglaries or murder, he replied "sex and murder." When asked to choose between sex and murder, he nodded his head, then replied "murder." In observing the patient, he was noted not to nod his head in speaking. We believe that William Heirens nodded his head to indicate that subjectively he felt sex was worse than murder, but in verbalizing stated murder.

He felt masturbation was worse than carrying a loaded revolver or the act of burglary. However, he replied that he felt murder was worse than masturbation.

He felt he was just as "responsible as any for his burglaries." As for the murders, "Whether it is my imagination or not, I seem to be blaming everything on George. It seems so real."

The patient struggled often against the "urge" to go out and seek excitement: "I would just put my hand on the table, then the headache would get too strong and I thought if I could just get out it would help. I had to get into any old thing. When I got these urges I would take out plans and draw how to get into certain places. I would burn up the plans; sometimes they helped. I was

playing a game with myself. I would draw up plans and then burn them or tear them up. I must have drawn about 500 plans on how to enter a house or rob a train or thing of that sort."

In his room, as has been already said, the urge to go out was often ushered in by desire to go to stool. Although he knew the urge to go out could be abolished by satisfying this desire, he often neglected to do so and, accepting the "urge," went out anyway. At no time did he, despite his struggling sometimes strongly and sometimes not at all, ever seek help from anyone. He told no one. The early peccadilloes in fetishism were confessed to the priest, but the burglaries and the murders never. He sought no help from the church, his family, medicine, nor even from a charlatan. "I had no confidence that they would not have me arrested and also that they would help me. . . . "On one occasion I took off my clothes and thought if I did that I would not be able to get out. I would get ready for bed. I resisted for about two hours. I tore sheets out of place and went into a sweat. My roommate came back from the Calver Club, and he asked me what was wrong, and I told him I had been drinking. I had to give him some excuse. I told him to go outside until I could get things fixed up. I put on my clothes and went out. I told him I was going out for a walk. I went out and burglarized that night. . . . I had locked my clothes in the closet and put the key in the washroom. I got in bed and then the urge came on. I just stayed in bed and tried to talk him (George) out of it, but it did not work. . . . I did this about three times. It was about Christmas time once that I had locked the door and that time there were people out in the corridor. I did not want them to see me go out and I went out of the window into the gutter and went down the fire escape. At that time when I could come in there would be snow on my feet."

He denied masturbation or any sexual relationships.

A reference has been made earlier to a mysterious individual named "George," whom the patient invokes from time to time as having responsibility for the patient's crimes. Some excerpts follow from our conversation on this subject: "He was just



realization of mine. I just stuck him in for no good reason. Before he seemed real to me. At Gibault things were so vague when I went out on burglary, it seemed to me that George was doing it. He seemed to be real. I cannot introduce him to anybody but he is there." . . . "Usually when I had to get out I would ask him where he was going. We would talk back and forth that way. He would say, down to the lake, and I would say, what are you going to do there? He said he would get some things. I would ask him why he was going and he said, because he wants to. It would be just that way. I would argue with him to stay and then I would get a headache. I would argue in every way possible with him but he always wanted to get out." . . . "I don't want you to laugh. It seems so darn real to me. Previous to this, I had given the whole matter a name. I just had a faint memory of these things, as to temperature or color of things. When I would go out it would make no difference to me if I had a summer suit on with freezing weather. I could not feel any temperature. I gave it the name of George." . . . "When I went out I had some vague ideas of what I would do. I took him as a benefactor for money or anything else I would take. If I did not throw the things away and have them in the morning. I would look them over and take out what I wanted and I attributed this to George. It was just a little game I was playing. . . . I would write letters to myself. I would talk to him. When I wanted to get out he would ask me where I was going, why I was going out, and what time I would be back and things of that nature. I begged him to stay. I had a headache almost all the time I was doing that. I was just stimulated to get out. One of the letters I had written was to George M. S. I figured if I could send him to Mexico. . . ." . . . "I gave him a name after I came out of Gibault. He came into the picture before I started to burglarize in 1942. In the beginning I always tried to resist and after that I tried to talk to him, and later on developed writing to him. . . . When I tried to resist him, I would get a headache. It seemed like my head was a balloon filled with water. When I would lay down it would fill the balloon and I would get

a pain. . . . He wrote about burglary. He would say that the best way to burglarize was to go in windows. He would give names of people like Mike, Joe and Harry. . . . Sometimes in the letters I would ask him for things I needed at school. I would ask him if I could borrow money from him. . . . When this urge would come out, I would tell him there would be a letter in the drawer for him. Sometimes he would answer after I wrote and then when I would read it, it would all seem new to me. I don't remember writing the answer and would not know I had written what was written. . . . I made a pact with George if I ever got caught through him that I would kill myself and kill him too. I thought that would scare him away but it never did. . . . He has to be part of me. . . ."

Asked, "In the last note you wrote, 'Catch me before I kill again; I cannot help myself,' what could you not help yourself from doing?" he answered, "From the murders. That was 'George' and I could not help what I was doing, and he was myself."

These conversations regarding "George," in our opinion, reveal a power for hysterical fantasy to be expected in a hysterical individual passing through long sustained emotional conflict. By hysteria we mean a condition produced by suggestion to an individual suffering from deep division in his emotional life. It is to be noted that in 1942 he went twice, just before George's invention, to see the movie, "Dr. Jekyll and Mr. Hyde," which "made a great impression" upon him. When asked, in his psychological examination, the name of his favorite movie, he said at once this title which was partially written down when he asked to change to, of all possible others, "Robin Hood." Only rarely did the patient for short periods lack insight into the true nature of the device he had constructed whereby he could account to himself for his actions, and at the same time enable him to continue doing them while he led otherwise an exemplary life and could continue his religious observances.

#### *Suicide Talk*

He made, after his arrest, several feeble, theatrical, puerile gestures toward suicide.

The original letters to his mother and father were given to us. These have been released to the daily press so we will not discuss them. He repeatedly stated he would commit suicide in order to do away with George. . . . In the jail he collected cigarette stubs, aspirins, pennies and small pieces of soap which he repeatedly stated were his plans for suicide.

### *Leadership*

There is in this young man an immense egocentricity. Despite his continuing failures to rule himself he has no anxiety, fears or lack of confidence in his abilities and powers. His reading revolves around the power principle: Nietzsche, Schopenhauer, and even Spinoza, of which he grasped nothing. Pictures of Hitler, Goering and Goebbels are in his scrap books and his favorite studies were a sketchy intellectual interest in "mass psychology." He writes in his notebook at school: "Just who am I? I begin to wonder after all I could be human as the rest are but to myself, I would laugh at such a thought. Oh these seem so much more superior. In plain words I think I'm a worm. It's from being a worm though, I like it: insignificant and obsolete. That's just what I need. Maybe if I'm all wrong in writing this. Probable I'll change my attitude soon. It's odd but I begin to like my habits now. Probably just a passing phase. I'll most likely hate myself when I do things disagreeable to myself. . . . I wonder why I can't run the world. It seems only great men have that choice. It's funny but I don't understand why I haven't the same equal chance. I guess they probable know just where to start & I don't. Wouldn't it be great to have that much power. Men sacrifice their lives for it. There must be an easier and faster way to gain control. . . . Why am I thinking these things. It's all nonsense. Probable never ever entered another mind. You've got a good imagination, Bill, but I doubt whether you'll get far with it. So far it's gotten you into trouble. Real trouble. Well, I guess that's life for you.

"Why the fish did I ever go out for football. I detest the game and yet I go in for the sport. That's some sign of you loosing your head. In about three years you'll probable end up in a coo-coo house. . . .

"Whoever got the idea that I could do great things and so sent me to school. It's sure a mystery. Maybe if I come down to earth I'll learn sum'min. . . .

"You god dammed nincompoop. Why the hell do you live is all I can wonder. Your one of the most unworthy persons I've understood to be able to live. Your sure not following your golden rules for control. In fact you've been standing still for the last two weeks."

Great News 7:20 Sept. 26 '45

"I'm now shaking with excitement. My hopes and prayers have been answered in one of my biggest chances in life. If I can only use my chance to the best advantage. The University of Chicago has accepted me into its enrollment. This is my first chance at showing how good I am to society and I intend to show even better signs. Tonight I feel as if the world were mine. All I have to do now is pray, giving thanks and vowing to do my best as humanly possible."

### "Plot VII

"Considering my present college status, considering my inability to control society, considering that I am loosing my moral code slightly; I hereby intend to change my whole way of living. Since I have devoted more time to psychology it should be easy. My plan described in this plot should be carried out fully. I shall attack human nature to my fullest extent."

The patient, as has been seen, had no emotional disturbance whatsoever after the completion of each of three murders. After the Brown murder "The dog barked and the lady started hollering. She had on a night gown. She jumped up and hollered. Then I took the knife and stabbed her—through the throat—just to keep her quiet. Going in I had an erection. When I realized what was going on I was in the living room. The knife was at the end of the bed. I took the knife out real quickly and washed it off." Asked if he read about the act he replied, "Yes, just like anything else in the paper. It did not bother me, no remorse—I read just the beginning; then I got tired."

After the Ross murder: "She screamed—I just stabbed her once. I went to a show

downtown. The next day I went back to work." Asked if it bothered him he replied, "No." Asked, "Do you feel you have done wrong now?" referring to the three murders, he replied, "I do, yes—I'm in here—but I don't feel anything about the whole matter. I never did."

#### *Laboratory Reports*

The laboratory reports of the various tests taken at the Illinois Neuropsychiatric Institute are as follows: The basal metabolism rate was  $-10\%$ , at which time the pulse was 80 and the blood pressure 125/80. The urine examination revealed a PH of 6 with no sugar or albumin, cells or casts. The blood pressure revealed a hemoglobin of 16.6 gm.; the color index was .89; the red cells were 5,690,000; the white cells were 5,650. The differential count revealed 27% lymphocytes, 7% monocytes, 66% neutrocytes. The blood serology was negative in the Kahn and Wassermann tests. The insulin tolerance test is reported within normal limits. The report of the electroencephalogram is as follows: "Low voltage electroencephalogram with some 9-11 per second activity. No focal abnormality. No seizure discharges. Big build-up with over-ventilation. Normal EEG for age. No evidence of damage or epileptiform activity in the accessible cortex." The spinal serology was normal. An x-ray of the skull reveals a skull of normal configuration and density. The vascular markings are normal. The pineal body is not calcified. The sella turcica is normal in size and configuration. There is no evidence of fracture or other pathology. The frontal sinuses are heavily calcified, though reasonably well pneumatized. The impression is a normal skull. X-rays of the lateral, anterior and posterior positions of the spine revealed no evidence of trauma or disease in the cervical, thoracic or lumbar spine. The flat plate of the abdomen revealed no foreign bodies.

#### *Psychologist's Report*

William Heirens was submitted to a series of carefully selected and conducted psychological tests, calculated to reveal trends, both conscious and underlying consciousness.

The quality of intellect was carefully tested and he was found to have an intelli-

gence quotient of 110—an average figure. He was cooperative, readily understood instructions, attempted all items offered, and answered questions freely.

On none of the psychological tests was there any indication of a psychosis or of malingering.

On personality questionnaires he was found to be outgoing and dominant with a lack of self-consciousness or feelings of inferiority. It must be remembered, however, that these questionnaires represent the subject's own evaluation of himself and may not necessarily conform with his actual behavior.

An evaluation of all the psychological techniques used, indicated a definite emotional insensitivity and instability severe enough to be considered abnormal, as well as a blunting of moral concepts.

The majority of tests tend to suggest hysteria.

We regret the lengthiness of this report; it represents, however, only a fraction of our total material. We believe that it conveys the reasons for the opinion expressed at the beginning of our statement; that William Heirens is not suffering from any psychosis nor mental retardation; that he has a deep sexual perversion and is as emotionally insensitive within, as he is incapable of feeling pain without. He is unstable, and hysterically unpredictable, and most of his actions can be swayed from time to time by the suggestions coming from his environment.

#### *Legal Disposition*

On September 4, 1946 William Heirens was arraigned in the Criminal Court of Cook County on Indictments 46-1465 to 46-1493 inclusive, and 46-1593, 46-1594 and 46-1654. He pleaded guilty to thirty of the charges and on September 5, 1946 received sentences on 24 burglaries of 1-year to life, to run concurrently; on 3 murders, natural life, to run consecutively; 1 robbery, 1-20 years to run consecutively; 1 burglary, 1-year to life to run consecutively; 1 assault to commit murder, 1-14 years to run consecutively. He was delivered to the Department of Public Safety of the State of Illinois at Stateville, Illinois on September 6, 1946.

## CONTROL OF COMMUNICABLE DISEASE IN A LARGE MENTAL HOSPITAL<sup>1</sup>

T. K. GRUBER, M. D., AND S. E. GOULD, M. D., ELOISE, MICH.

Problems in the control of communicable disease in mental hospitals are of concern to all medical and non-medical officers who are directly or indirectly charged with the care of patients in such institutions. Because of this responsibility, it may be useful to outline the experiences and practices of a large county mental and general hospital.

The Wayne County General Hospital and Infirmary is located at Eloise, Michigan, in the County of Wayne, the County in which the City of Detroit is situated. The institution is composed of (1) a general hospital, having approximately 1200 patients with an intern and resident staff numbering 52; (2) an infirmary, having about 1500 patients, whose medical care is in charge of the general hospital staff; and (3) a psychiatric division, of approximately 4000 patients, with a staff of 23 psychiatrists. The total number of employees is over 1800. The total number of patients in the past has exceeded 10,000.

Psychiatric patients are hospitalized in ten buildings, the capacities of which vary from 350 to 1000 beds. Except for patients who require isolation in private rooms, patients are cared for generally in large wards, each ward having a capacity of from 30 to 100 beds. The patients in the institution have various types of psychoses.

*Physical Examination.*—Each new employee is given a complete physical examination, including a blood test and urinalysis, is required to submit a specimen of stool and to have an X-ray examination of the chest. Specimens of stool are examined for blood, parasites, and pathogenic bacteria. The same examinations are made on each patient upon admittance, except that fluoroscopy of the chest is substituted for roentgen films.

*Immunisation Against Smallpox, Typhoid Fever and Diphtheria.*—Each new patient

and new employee is immunized against smallpox, typhoid fever, and diphtheria unless he has had active infection with the respective disease, or has been immunized against that disease within the preceding 5 years and can produce a medical certificate to that effect.

Immunization against typhoid fever is accomplished by subcutaneous inoculation with 0.25 cc. of typhoid vaccine (1 billion organisms per cc.), and two subsequent inoculations of 0.5 cc. each at weekly intervals. If typhoid vaccine has been administered during the preceding year, a single "booster" dose of 0.1 cc. is given intradermally. After admittance, while the patient remains in the hospital, he is given such an additional dose intradermally each year. The need for immunization against typhoid fever was made apparent in 1936 when a fatal case of typhoid fever was discovered in a mental patient who had not been outside of the institution for some years previously. She was diagnosed as having typhoid fever clinically, and her death was due to peritonitis which followed perforation of a typhoidal ulcer of the lower ileum.

A single inoculation of smallpox vaccine is given to persons having an old smallpox scar. The inoculation is repeated, if the vaccination does not "take," in persons who do not have a scar of an old vaccination. Whenever there is danger of an epidemic of smallpox in the City of Detroit or elsewhere in the county, all employees and patients in the institution are required to submit to such an inoculation. In performing vaccination, the site of inoculation is not cleaned with alcohol, but only with soap and water. Alcohol cleansing inhibits approximately 50 per cent of vaccinations. Each employee and each patient is given a Schick test. Persons having a positive test are inoculated with 3 doses of 1 cc. each of diphtheria toxin-antitoxin at weekly intervals. Formerly a single inoculation of alum toxoid was used but was discontinued on account of some severe reac-

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From the Wayne County General Hospital and Infirmary, Eloise, Mich.

tions. It is planned to substitute fluid toxoid as soon as it becomes available. With this material, as with alum toxoid, only one immunizing dose is required.

*Control of Tuberculosis.*—The incidence of pulmonary tuberculosis in mental hospitals is generally higher than in the general population in the areas from which patients are received. In 1935 at Eloise there were 38 autopsies performed on patients dying in the mental hospital. Eight of these patients, or 21 percent, were found to have died of pulmonary tuberculosis. In an effort to control the spread of tuberculosis in the wards of the mental hospital, a survey of case finding of the disease among patients in the institution was begun in 1936 by Altshuler and Bailey(1), and completed in 1940 by Hoffmann and Bailey(3). The Mantoux tuberculin test was used as the first screening method to eliminate nonreactors from those requiring subsequent X-ray examinations of the chest for the possible presence of the disease. Three thousand, two hundred and eleven patients or employees were so tested. Of this number, 82 percent were reactors who required subsequent X-ray examination of the lungs. Since there were only 18 percent of patients with negative skin readings, the tuberculin test was discarded as a screening test. It is interesting to note that of 447 patients who were tested upon admittance, only 49 percent gave a positive tuberculin reaction, whereas of 2410 patients who had already been hospitalized, 88 percent gave reactions. These figures suggest that patients who are admitted without infection become exposed to the infection while in the institution.

In place of the tuberculin test, it was found feasible to take X-ray films of the chest of each employee entering hospital service and to make a fluoroscopic examination of the chest of each patient upon admittance, and thereafter to repeat such examinations once yearly. Patients found to have positive or questionable evidence of pulmonary disease upon fluoroscopy were subjected to stereoscopic X-ray examinations of the chest. The diagnosis was based upon the findings in the roentgenograms. Routine X-ray films of all patients were not taken because of the large cost and the ex-

cessive amount of work which would have been entailed by such a program. It was realized, and later demonstrated, that the fluoroscopic method of screening missed some patients with tuberculous lesions.

During the survey, 4477 patients were examined and 276 were found to be tuberculous (6.2 percent); while 1200 employees were examined and 42 were found to be tuberculous (3.5 percent).

Altshuler and Bailey found that of the patients who were tuberculous, only 1.8 percent had been hospitalized less than one year, while 66 percent had been hospitalized five years or more. It was also found that the type of mental disease was not related to the frequency with which tuberculosis was contracted, except insofar as the type of mental disease affected the length of hospitalization.

As the survey progressed, patients found to have pulmonary tuberculosis were isolated in special wards for observation and treatment. Since these special wards for the care of tuberculous mental patients have been established at Eloise, the hospital has been receiving from other hospitals in Wayne County, patients with tuberculosis who develop psychosis in the course of a pulmonary infection. These wards are fully equipped for general physical examinations and medical treatment, and are provided with fluoroscopic units and apparatus for the production of pneumothorax. At the present time there are approximately 200 mental patients under treatment for tuberculosis in these wards. About one-third of the tuberculous patients are female and two-thirds are male, while of the total number of mental patients in the institution 54 percent are female and 46 percent are male.

*Examination of Water Supply.*—The water supply comes from the City of Detroit and travels approximately 17 miles from the purification plant before reaching the institution. Bacteriologic examinations of the water are made in the hospital laboratory each day except Sunday. These examinations are made to obviate the possibility of infection seeping into the water system by suction from leakage of water mains or by back siphonage before or after the water reaches the institution. The bacteriologic examination of water includes that of a large water

reservoir having a capacity of 1,500,000 gallons, which the hospital maintains in case of a sudden disruption of its source of water supply from the city. This reservoir "floats" on the intake supply line to prevent stagnation. The hospital uses an average of 1,000,000 gallons of water per day.

In order to prevent the possibility of spread of disease through contaminated water by back siphonage into the inlet pipes, it is important to inspect all plumbing periodically and to correct all defects in the water system. Vacuum-breakers have been installed on all toilets and other fixtures, and no faucet is allowed to extend within three-fourths of an inch of the highest possible water level of any sink, tub or water basin. It is obvious that disease spread through the water system may reach epidemic proportions and may be catastrophic in its effects.

*Examination of Milk Supply.*—The hospital receives its milk supply from two sources: (1) a herd of about 125 cows which is owned by the hospital and maintained on the hospital farm, and (2) milk that is purchased.

In 1935 and 1936, milk used in the institution was not pasteurized. During these two years, a survey of the incidence of brucellosis in the institution was conducted by Gould and Huddleson (2). It was found that 10 percent of the herd maintained by the institution, and 14 percent of the cows in the herd, showed a significant agglutinating titer in the blood for Bang's disease. There were 8124 patients and employees who were skin-tested with an extract of brucella organisms and 10 percent gave a positive intradermal reaction, indicating past exposure and sensitization to the organism of undulant fever. Of the 2394 mental patients tested, 15.4 percent gave a positive skin reaction. It was believed that mental patients showed a higher percentage of brucella sensitization because they had consumed unpasteurized milk for longer periods than had the employees or other groups of patients tested.

During the course of the survey there were 6 persons found to have active brucellosis, all of whom recovered. Following examination of the blood of the cattle for evidence of infection, all brucella reactors were isolated and the milk of infected cows was boiled or used only for cooking purposes.

As a result of the survey among patients and employees, a modern pasteurization plant was constructed on the premises and all milk, unless previously pasteurized, is subjected to such treatment. Since 1937, all milk which is produced on the premises, or which is purchased, is subjected to daily bacteriologic examination to insure its safety for human consumption.

*Control of Insect Pests.*—Measures which are used to control insect pests include adequate screening of windows and doors to exclude flies and mosquitoes; now, of course, periodic spraying with DDT powders or liquids about water inlets and other harboring places, as indicated, to control roaches; and periodic fumigation of mattresses with carbon tetrachloride for destruction of bedbugs. The chamber which is used for fumigation of mattresses is simple, inexpensive and highly effective, and is recommended for use by all hospitals, hotels and similar institutions. Mattresses and beds are also now sprayed with DDT to eradicate bedbugs.

*Control of Outbreaks of Gastro-Enteritis.*—It is estimated that, of the 1800 employees in the institution, about 1000 employees are connected directly or indirectly with handling of food. In addition, there are about 500 non-paid workers in the institution who also assist in some capacity in the handling of food. The opportunity is therefore great for the spread of gastrointestinal diseases within the institution. Because mental patients are hospitalized in ten different buildings and each building has its own separate kitchen, outbreaks of gastro-enteritis are usually confined to individual buildings. As might be expected in a climate like that of Michigan, outbreaks of gastro-enteritis are more frequent during the summer and autumn months.

Each employee and non-paid inmate helper who assists in any way in the handling of food is required to have a physical examination and an examination of the stool. Foodhandlers are given printed instructions regarding their work, with emphasis on the matter of personal hygiene as it affects the spread of disease through handling of food. Records are kept of the results of physical examinations of foodhandlers and of the examination of their stool. Additional instruction in food handling is given by the Depart-

ment of Cuisine. Lectures and demonstrations on matters of health and sanitation are given by medical officers and bacteriologists.

The method of isolation of patients with acute gastro-enteritis may be of interest. Any patient who develops a gastro-intestinal upset with vomiting or with diarrhea is immediately isolated and a stool specimen sent to the laboratory for bacteriologic examination. If several patients become infected simultaneously or if their infections occur successively at short intervals, they are isolated and precautions are taken to control the spread of the infection. If a group of 10 or more patients are affected in an outbreak of gastro-intestinal disease, a special team of doctors, nurses and attendants are assigned to the task of studying and controlling the outbreak. Two nurses are then assigned to check on the washing of hands and cleaning of fingernails of all foodhandlers in the building where the outbreak has occurred.

The most frequent and important type of infection encountered during the past 15 years has been the group of bacillary dysentery, caused by the *Shigella*-*Salmonella* group of bacteria. It is to be expected that hospitalized patients who have been confined to the institution for a number of years will not be in the best of physical condition and that gastro-intestinal infections will produce a more severe effect upon them than upon robust healthy individuals. Old arteriosclerotic and cardiac patients are more likely to succumb to an infection of this type as a result of rapid dehydration and exhaustion, and, sometimes of toxemia. Several of these outbreaks have furnished the medical department with the opportunity for studying methods of treatment. Thus, Smyth *et al.* (4), in an outbreak of acute bacillary dysentery of the Flexner variety (*Shigella dysenteriae*, Flexner) in 1942, found that both sulfaguanidine and succinylsulfathiazole were of distinct value in treatment. In a recent outbreak in 1945 of gastro-enteritis, *Shigella*

*sonnei* was isolated from the stool of 41 patients or attendants. This infection was believed to have been brought into the institution from neighboring communities. Patients were treated experimentally with streptomycin. Stool examinations were made of approximately 1000 patients and attendants. Incidentally, during this examination four typhoid carriers were found among patients. These carriers were isolated and three of the patients were subjected to cholecystectomy. The fourth carrier was too old to risk surgical operation. Another patient was found to be a carrier of *Shigella parady-senteriae*, variety Boyd 103. In another building, 6 patients were found to have *Shigella dysenteriae*, variety Flexner Z.

The important point to be stressed in this discussion is that infectious diseases should not be allowed to spread in a mental hospital. Modern health standards require that every practical device known for the control of communicable diseases must be applied.

The average mental hospital is a self-contained community, perhaps as large as the average town in the United States. For the proper control of communicable disease, each mental hospital should have the equivalent of a well operated health department, employing the most modern technics. It is recommended that the operation of such a health department should be entrusted to a qualified full-time health officer, under the direction of the pathologist of the institution.

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# THE IMPORTANCE OF THE EMOTIONAL FACTOR IN THE CONVULSIVE DISORDERS OF CHILDREN<sup>1</sup>

## (A PRELIMINARY REPORT)

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One of the most important findings which has emerged from researches on the convulsive disorders is the multiplicity of causes(1, 2, 3). Among the many mentioned are disturbed emotional states, though they are not regarded as primary. As early as 1885 Gowers(4), discussing the exciting causes of epilepsy, mentions "of all the immediate causes the most potent are psychical—fright, excitement, anxiety." He attributed importance to acute emotional disturbances in one-seventh of a series of 1,150 cases studied. He also suggested that prolonged anxiety is an important influence in the course of the disease. Lennox and Cobb(5) state "psychological factors in epilepsy are important." Campbell(6) Fremont-Smith(7, 8) Rose and Bond(9) and Clark(10) have reported the direct relationship between emotional tension and seizures. Other papers have been abstracted by Dunbar(11).

Our interest in the importance of the emotional factors in convulsive disorders in children developed out of observation of patients with this complaint admitted to the department of pediatrics of the University of Minnesota Hospitals. We noted a lessening or cessation of their seizure states, both in frequency and severity, during hospital stay. Cobb's(12) report emphasizing the advantages of the psychiatric approach to the treatment of patients suffering from epilepsy stimulated us to observe and evaluate more critically tension-producing factors and the emotional reaction to them.

In the belief that childhood offers many advantages for such study and that a real need exists to investigate further this little-explored area, this preliminary paper devoted exclusively to children briefly reports our findings in 22 cases. Two adolescents referred to us for other reasons, but who had

had convulsions in the past, are included as they serve to illustrate the importance of severe acute emotional trauma.

In this series 12 were girls and 10 were boys. Ages ranged from 2 to 16 years. The duration of seizures from the onset varied from 6 weeks to 10 years, the majority occurring within 2 years prior to referral. All types of seizures were represented. An aura was reported by 7 patients. Frequency varied from one isolated seizure of the grand mal type to 20 or 30 daily petit mal spells at the time of the referral. Fifteen of the patients were hospitalized; the remaining 7 were followed on an outpatient basis.

Study of each patient included the following: (1) a careful history with particular attention to the hereditary, birth, developmental, health and family history; (2) thorough physical and neurological examination and basic laboratory study with special studies when necessary (at the time these patients were under observation we did not have the advantage of electroencephalography); (3) careful basic psychological testing when indicated; (4) repeated interviews with the parents and patients when possible to determine (a) general family organization, attitudes and relationships, (b) unusual stresses and strains present within the family structure, (c) worries and conflicts which the patients themselves had.

In illustration we cite four case histories.

1. "A," female, age 3, was admitted to hospital for study of "spells" present since age 1 year and 3 months. The referring physician described them as "several during the day—patient stiffens cut—focuses eyes on distant objects and falls into convulsive tremor." His physical and neurological examination were negative. Phenobarbital and calcium therapy were ineffective.

Birth, health, developmental and family history was reported negative. Patient was born out of wedlock and placed in her first foster home early in infancy where these spells began. The foster parents were deeply attached to our patient. Because of "over-stimulation" on their part she was replaced in a second foster home where spells promptly ceased. They recurred when replacement

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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in a third foster home was necessary. She was having from 7 to 10 seizures (petit mal) daily when admitted to the hospital.

Physical, neurological and special laboratory studies (routine blood, urine, spinal fluid, x-rays and pitressin test) were negative. Her intelligence was high average. Except for a few mild seizures following hospitalization, none was observed during her 28-day stay.

A poor placement following discharge from hospital precipitated a recurrence of her spells with an increase in frequency and severity. In addition, she developed many fears, bit her lips and fingers and began stumbling about awkwardly. Her eating and sleeping habits were totally disorganized and she developed a stubborn cystitis.

Replacement in an excellent foster home—her fifth—brought a gradual cessation of her spells and other symptoms. Following this improvement she was prepared for a permanent placement which she readily accepted. For 6 years she has remained free of all previous symptoms. No drug therapy was used at any time during our study of her.

2. "B," female, age 9, was admitted October, 1940, for study of her "spells" which had occurred one to three times nightly for the preceding 6 weeks. These spells were of the tonic-clonic type beginning in her left arm and becoming generalized.

Pregnancy, birth, developmental, health and family medical history was negative. Physical, neurological and special procedures, including pneumoencephalogram, were likewise negative.

Following placement on water restriction (900 cc. daily) with no lessening of her seizures, dilantin was administered. Spells promptly ceased. She continued free from spells when sodium bicarbonate capsules were substituted. No spells recurred when all medical treatment was discontinued. She was discharged in December 1940, after an attempt to work with her in psychiatric interviews. While friendly, she resented our efforts. However, at this time she indicated a strong attachment to her mother and an unusual antagonism to her younger brother. Despite a superior intelligence (I. Q. 133), personality inventories suggested marked feelings of inadequacy and inferiority.

In October 1941, her spells recurred. As she refused hospitalization, she was interviewed in the pediatric outpatient department. On one occasion she burst out, "Why do I have to start having convulsions every time there is a new baby in the family?" Phenobarbital and dilantin decreased the frequency and severity of the spells.

Three months later she was re-admitted as she was having 4 or 5 spells each night during which she bit her tongue and sometimes soiled the bed. Careful re-check of her physical and neurological condition was negative.

Again psychiatric interviews were tried with greater success. With the use of play technique described by Conn(13), she began discussing her strong attachment to her mother, her hatred of her younger brother and her fear of hospitalization. She was afraid her mother would not love her if she remained away too long. It was then we learned that her initial seizures came on soon after the birth of the fourth child in the family and re-

curred when the fifth was born. It seemed that each successive birth represented a threat of displacement in the affection of her mother. As we were able to relieve her anxiety by working with her as well as her mother in psychiatric interviews, she began to improve. She was discharged on no medication. Approximately 2 years later during another period of exaggerated tension she returned. Because she resisted psychiatric interviews, she was placed on dilantin and followed in our outpatient department. Within the year her spells ceased and medication was discontinued. She has remained free from seizures for over 3 years.

3. "C," male, 12 years, committed to the State Colony for Epileptics (7-18-39) as a potentially dangerous epileptic, was referred for study before placement. In addition to his convulsive seizures, he stuttered, had violent temper tantrums and did poorly in school.

His first seizure was observed in December 1936 at the age of 9. Seizures were typical of the grand mal type with exception of loss of sphincter control. Attacks were usually preceded by severe frontal headaches and followed by deep sleep.

"C" was delivered after a normal full-term pregnancy by instrument after a 24-hour labor. Resuscitation was reported difficult. With the exception of a mastoid infection at age 7 years, persistent enuresis and a fall from a truck at age 9, he was considered a healthy lad.

Admitted to hospital 11-39 he had only one observed mild seizure during a 68-day stay. This occurred the day following admission after a visit with his mother. Physical, neurological and all special studies including pneumoencephalography and the pitressin test were negative. His behavior early during hospital stay was erratic. Though it improved, he became unmanageable requiring isolation the day prior to discharge. For the following several months he lived in a children's home, adjusting fairly well. Here a few mild (petit mal) seizures occurred. At no time did he have any medication.

During his hospital stay he, as well as his parents and the paternal grandparents, was seen in psychiatric interviews. Briefly the background was defined as follows: "C" was the second of 5 siblings. Family life had never been happy due to parental friction, augmented by interference of relatives. The father, age 38, an attractive pleasant-appearing person continued to be dependent upon the paternal grandmother. He was alcoholic, unable to assume any responsibility, and was known "to run about with other women." The mother, age 37, was a tense, nervous, highstrung woman who "went to pieces" when she learned her husband had applied for divorce. Contrary to our patient's wishes, the mother was granted custody of all the children when divorce was finally settled. It was necessary for the mother to work to supplement the alimony granted.

Mother reported "C" different from her other children and found him difficult to manage. Her comment that she "ignored him until he became unbearable and then spanked him" strongly suggested an unconscious rejection of him. His severe temper

tantrums, cruelty to his siblings, obstreperous behavior toward his mother and her family made life in the home miserable. To make matters worse paternal grandparents favored "C."

During our interviews with him he was usually friendly and spoke spontaneously of the frictions in his home. He openly denounced his mother and siblings, acknowledged fantasizing freely about death of his mother and related terrifying night dreams. He thoroughly disliked school and wanted to live on the farm with the paternal grandparents. He often wept as he told his story. His stuttering became worse during his discussion of these troublesome problems.

It was possible for us to arrange for his placement with the paternal grandparents. With the exception of a short interval when he was difficult to manage, he did well. Due to the grandmother's illness, he went to live with his father, where he had no supervision. His seizures recurred and he became a difficult social problem. His seizures ceased for the following 9 months after return to the home of his grandparents. In 1942, when illness recurred in the grandparents' home, his seizures reappeared and this time it became essential to institutionalize him as medication was ineffectual in the control of his seizures.

4. "D," male, 16 years, was referred to our hospital for vocational advice due to school failure. Since the age of ten he had had convulsive seizures diagnosed "idiopathic epilepsy." In addition, he had many petit mal spells—16 to 20 daily. Thorough physical studies at age 12 were reported negative. Vigorous anti-convulsant therapy modified seizures moderately.

He was a full-term infant, born spontaneously after a 26-hour labor. He was cyanotic at birth and did not cry for 20 minutes after delivery. As he became cyanotic again a few hours later, he was placed in an incubator and kept there for 3 days. Except for a fall, which occurred at the age of 6, after which he was dazed and vomited, health history was negative until the onset of his seizures at age 10 years.

Following failure to pass the fifth grade at the age of 10 years, he earned an I. Q. of 79 on the Stanford-Binet test and was considered of borderline intelligence.

At the time of referral, he was virtually a recluse, with no friends, no interests or ambitions and thoroughly discouraged.

"D," the oldest of 5 siblings, had always had trouble in school. His father, an aggressive, "self-made" man, had become a leader in his community. Hoping his son would achieve in school, he was much chagrined over the lad's school failure. Though not overtly admitting his disappointment, he considered his son a total loss. The mother, a quiet, stable, intelligent woman, seemed to have a good understanding of her son's problem. Tension was intense between our patient and the other siblings as they gradually surpassed him in school.

At the time of our study physical examination was negative.

Recheck of his intellectual status revealed a scatter in his I. Q. performance from 78 to 117. A

careful study of his successes and failures on these tests strongly suggested a specific reading disability which was verified.

He responded nicely to interest taken in him. Arrangements were made to tutor him privately for correction of his reading disability. The parents were encouraged to decrease their domination of him and give him increasing responsibility, which included the acquiring of a part-time job.

Coincident with this program his seizures were substantially reduced in frequency and severity. In the course of the succeeding months he had only 3 grand mal seizures, associated either with fatigue or increase in emotional tension. Petit mal attacks ceased.

#### HEREDITY

In 3 cases, all girls, a history of convulsive disorders in one parent was encountered. One mother had had "spells" early in life which had decreased as she matured. One father, age 53, had had seizures of the grand mal type for five years prior to the onset of convulsions in our patient. The father of another had been a known epileptic for many years. No other significant family medical history was obtained.

#### BIRTH AND DEVELOPMENTAL HISTORY

As far as could be determined the pregnancy, delivery, health and developmental history was negative in all but 3 patients. Two patients required resuscitation following difficult delivery. Another patient required placement in an incubator for 3 days because of extreme cyanosis.

#### PHYSICAL STUDIES

Physical examinations were generally negative.

With the exception of one patient who developed a bilateral strabismus following a severe seizure in early infancy, neurological examinations were non-contributory.

Laboratory studies, including x-rays of skulls and pneumo-encephalograms when indicated, offered little in the way of explaining the seizures.

Of the 6 patients who had the McQuarrie pitressin test, convulsions were induced in only 2 patients. One patient, a congenital luetic, had a positive blood Wassermann.

Surgical exploration (craniotomy) was undertaken in one patient who had typical Jacksonian seizures. Nothing significant was observed at operation.

### PSYCHOLOGICAL TESTING

Where indicated, psychological, school achievement and tests of special abilities and disabilities were carried out. Test scores varied from 77 to 133, with the majority falling well within the average range of "normal" intelligence. Bilingualism was encountered in one case, which may have penalized this patient in school performance.

Two cases of specific reading disability were found. One patient was to have been in the eighth grade in school, but, because of his reading deficiency, school achievement test revealed that he was functioning at the level of grade 2 and 3 in reading and arithmetic. This boy, utterly discouraged by school failure, said repeatedly, "I'm just dumb, I guess." The convulsions of another boy, age 15, who had been trying to get through the eighth grade, but was functioning at the level of grade 5 in reading occurred at the time he began failing in school.

### FAMILY ORGANIZATION—HOME LIFE, BACKGROUNDS AND ATTITUDES

In the belief that home conditions are important in a child's life, an attempt has been made to classify, though perhaps crudely, the actual situation which the children in our series faced. The summary is below.

#### SUMMARY OF HOME BACKGROUNDS

1. Patient's living at home with both parents .....	12
a. Definite tension existing in home .....	10
b. No discernible tension in home .....	2
2. Patients from broken homes....	10
a. Illegitimate .....	2
b. Mother dead .....	2
c. Father dead .....	1
d. Parents separated or divorced.	5

Marked intrafamily tension existed in the homes of 10 of the 12 children living at home with both parents. Several examples will serve to illustrate. Marked parental conflict was noted in the home of one patient where both parents were unstable emotionally. The mother, the dominant parent, felt much superior to the father, who was a weak, submissive person. In addition, the mother candidly acknowledged, during one interview, that she resented becoming

pregnant with our patient and had always thoroughly disliked him.

Still another patient was overtly rejected by her emotionally immature mother whose guilt over the premarital pregnancy persisted. Though this was the basic factor in the situation, home tension was sustained by poor marital adjustment, constant fear of pregnancy and financial worries.

Five of the children coming from broken homes were living with one parent. Each of these families continued to suffer from marked intrafamily tension apart from the breaking up of the original home. We have cited the situation of patient "C" who thoroughly hated his mother and siblings.

Two of the children were born out of wedlock. One of these we have cited in our illustrations. The other patient, age 15, had been in a foster home, believing it to be his real home. At age 13 he was terrifically upset when, in a fit of anger, his foster mother told him he was not her child and she really had no responsibility for him. From this point on, he became extremely difficult to manage which resulted in increased punishment of him by the foster parents. According to his own story his first seizure followed a severe beating.

The parents of 8 patients exhibited marked anxiety and overprotectiveness, permitting little opportunity for spontaneity on the part of the child himself. Outright rejection of the children on the part of one or both parents was noted in 8 homes.

Intense sibling rivalry seemed significant in 11 patients. For example, one mother stated spontaneously in interviews that her daughter would "pick on her little sister," inviting parental interference and punishment. Following this the patient would have a seizure. Intense jealousy toward siblings who were achieving more adequately in school was noted in several patients. Real hatred of other siblings was found in 6 of our patients. Two of these so thoroughly hated their older siblings that they attempted to do them bodily harm.

A close relationship between the onset of seizures and an experience heavily charged with emotion seems apparent in 11 cases. Severe anger growing out of quarrels preceded the first seizure in 3 of our patients.

Fright seems to have been important in 3 patients. Spells began in one patient after a fall which frightened not only the patient but the parents as well. Another, who was in a correctional institution, developed his first grand mal seizure shortly after receiving word that his mother had been killed. The mother of still another patient definitely stated that fright associated with an appendectomy was important. A combination of anger, hostility and deep-seated hate seems to be important in a patient whose spell followed a severe beating which he had received from the man whom he had thought was his own father, but who in reality was his foster father.

The patient who had only one grand mal spell of 15 to 20 minutes' duration presents an interesting history. This boy was having difficulty with his father—the two violently disliked each other. During one of their frequent periods of hostility, a very close friend of his died suddenly. The morning of the memorial service a violent quarrel with the father occurred. Our patient ate no breakfast or lunch. His grief was intense during the memorial service and continued for several hours thereafter. Finally, realizing how hungry he was, he had an ice cream soda at the corner drugstore. A few moments later he had his fit on the street which lasted approximately 20 minutes. This is the only seizure this boy has had.

Another patient likewise presents an interesting sequence of events. At the age of 12 years she was admitted to the hospital because of the sudden onset of seizures so severe it was necessary, in the opinion of the local physician, to administer ether to control them. Her spells developed the evening of the day a state social agency had assumed custody of the children in her family, including herself. She has never accepted this action on the part of the state authorities. Though she has not had a recurrence of her seizures, she did develop finally a severe psychiatric problem of the hysterical type.

As a group these patients responded most readily to an interest in them, their worries and feelings about themselves and others. Early traumatic experiences, disturbing dreams, dread of failure in school, feelings about home, parents and siblings were freely related in the majority of in-

stances. One patient with a bilateral squint told of the ridicule she suffered at school, "They call me 'cross eyes.' I'll hit them so hard they'll get them and then they'll know how it feels." Another patient repeatedly emphasized, "They (her younger brothers) make me so nervous." She quickly added that she wished they lived elsewhere. Still another patient told how he hated his younger siblings, "They make me so mad I hit them." During periods of uncontrollable rage this boy had taken after his mother with a knife.

Disturbing dreams were present in nearly every case. The majority of them suggested the prevalence of marked anxiety, hostility and insecurity. Dreams of falling, of being pursued by fierce animals or in some instances grotesque adults were most common. Several of our patients were outspoken in the expression of hostility and resentment toward their parents and other members of their families.

The majority of these patients improved as they shared their worries and conflicts. Our most outstanding success was a young lad who showed immediate improvement following free discussion of the difficulties which his mother and father were having at home.

Five of the 15 patients who were hospitalized had no observed spells at any time during hospitalization. Though only 4 of the remainder continued having seizures while in hospital, their spells did not occur as frequently nor were they as severe as prior to admission. Cessation of seizures occurred in 4 of these 10 patients without the use of medication.

In our 22 cases 10 have continued to remain free from seizures. Six continue to have spells though these are less frequent and less severe than prior to study. It was necessary to institutionalize the remaining 6 all of whom came from the most difficult and unmodifiable situations.

Cobb's (14) suggestion of "finding several causes and giving to each its proper emphasis" seems well illustrated in this series. The inclusion of psychotherapy should in no way militate against the use of anti-convulsant drug therapy, water restriction or dietary measures; all should be used as indicated. For Bowlby (15) has rightfully

stressed, "It is often exceedingly difficult to distinguish between epilepsy and hysterical fits." He further suggests "There is no true line dividing the two conditions although modern methods of electroencephalography do seem to be establishing a difference. Moreover there is no sound reason for regarding idiopathic epilepsy as organic in distinction to hysteria which is psychogenic. Many cases could be cited where fits have followed an emotional shock whilst their relation to repressed hatred is obvious, one child having a fit where another would get into a rage." Kraines(16) and Campbell(6) have emphasized the importance of habit formation in the convulsive disorders. Each seizure makes easier the occurrence of another.

If every physician dealing with the convulsive disorders of all age ranges, but particularly children, could be encouraged to consider and to deal constructively with the situational and emotional factors early in each case, we are sure much could be done to ease subsequent care of these patients and their families.

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## CASE REPORT

### RELATIONSHIP THERAPY IN A CHILDREN'S PSYCHIATRIC WARD

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The psychiatric nurse, together with her non-professional associates on the ward, can play a direct psychotherapeutic rôle in cases of acute behavior problems of children by relating herself to the children in such a way as to meet their emotional needs.

The organization and functioning of the children's ward at the Illinois Neuropsychiatric Institute, where work of this kind has been carried on, has been described elsewhere.<sup>1</sup> The present report illustrates the effectiveness of this type of therapy by presenting the case of John whose extreme hyperactivity and destructiveness combined with the handicaps of epilepsy and mental deficiency taxed severely not only the professional but also the personal resources of those who worked with him. The staff had to overcome the feeling of hopelessness usually attached to epilepsy and feeble-mindedness and to recognize that the behavior difficulty could be treated in spite of these other undeniably serious problems. Medication was administered only for the epilepsy; formal psychotherapy was considered impossible and was not attempted. The regimen of the ward which was of therapeutic value for the other children meant nothing to this patient. He began to improve only after he had developed attachments to the nurses and other ward personnel. These relationships partly met his enormous need for love and attention and created the affective milieu within which he was enabled to change in a year's time from a violent, unpredictable little animal to a fairly happy, reasonably tractable little boy.

John was 7 when he was referred to the Juvenile Court by police who on several occasions had found him wandering far from home. The court asked the Institute for Juvenile Research, a state-operated child guidance clinic, to make a study of the case. It learned that John was the second child of poor immigrant parents. The father, characterized

as a brutal person, deserted before John's birth. The mother then formed a relationship with another man by whom she had 4 children. This man was said to have made sexual approaches to the children. The family lived under cramped and squalid conditions; the children were dirty and unsupervised. The mother was described as dull and distraught.

John's birth and early developmental history were uneventful. However, at 20 months when he was hospitalized for infantile diarrhea and pneumonia he was found to be rachitic and malnourished. His first convulsions took place at this time. When hospitalized at the age of 6 for burns sustained during a seizure a diagnosis of ideopathic epilepsy was made. Treatment was sporadic because of the mother's opposition. The severity and frequency of the seizures prevented his attending school. He roamed the streets begging for pennies and collected worthless odds and ends. Sometimes he was extremely affectionate toward members of the family or strangers. He was subject to fits of violent anger. He would exhibit his genitalia, urinate on the floor and break furniture. When his mother did not meet his constant demands for demonstrations of affection he would tear off a finger- or toe-nail.

The Institute for Juvenile Research decided to place John in the ward, of which it is in charge, for further study. He came with his mother and the social worker. He allowed his mother to go but clung desperately to the social worker. He undressed himself for his admission bath, rolled and splashed in the water and allowed the nurse to dress him. He kissed and hugged her, saying, "My mother beats me. Will you live with me and be my mother? Give me lots of marbles and blocks."

According to ward practice, he was placed in isolation. He was given toys and considerable attention to which he responded with affection. But when he was required to go to bed, he pulled off his clothes, ran into the corridor yelling profane insults in two languages. He became so wildly destructive that it was necessary to remove his bed from the room; but later, when the nurse suggested that he help her put it back, he enthusiastically assisted her, got into bed and fell asleep.

During the isolation period he ate ravenously. When left alone he would tear off a toenail with his teeth or thrust a finger down his throat to induce vomiting. He urinated on the floor, stuffed paper into the toilet to make it overflow. He scaled the wall in the corner of his room and for minutes at a time stayed up there, clinging monkey-fashion to the molding with his remarkably prehensile

<sup>1</sup> Am. J. Nursing, June 1943.

The author was assisted by Helen Sutton, R. N. in compiling material for this report.

toes. He took every opportunity to make noise by banging on the walls and the furniture and by slamming doors. He continued to beg, "I am a poor boy. I ain't got no daddy or mama to love me . . . poor Johnnie, mama kiss daddy, daddy kiss mama . . ." He pounced upon and tried to choke a nurse who was instilling medication in his ears which were discharging.

Because it was believed that the continual thwarting necessary to enforce his isolation exaggerated his hyperactivity, John was transferred to the ward before the end of the isolation period. He did not enter any form of group play nor did he ignore the other children. He chased them, performed his tricks for them, jumped into their beds. He tried to insert his fingers into their rectums. He exhibited his genitalia, tried to seize hold of the boys' penises, asked to suck the girls' breasts. He struck other children with any handy object. He beat one patient with a baseball bat. He spat at the nurses, banged on their office doors, stole money from their purses. He rubbed his genitalia against female ward personnel and tried to feel their breasts. In the toilet he masturbated rectally. Following a prolapse of the rectum, he pinched his mucosa until there was profuse bleeding. He would then smear himself and the walls with blood and feces. The wet neutral packs which were administered during the first period following John's release from isolation were necessary not only for sedation but also as a practical means of control. John was clearly the most disturbed and disturbing child on the ward.

The first manifestation of epilepsy, a seizure of the grand mal type, occurred shortly after his hospitalization. In order to determine the type, frequency and rhythm of the seizures, the psychiatrist ordered that no medication be given to control them. Later, phenobarbital brought them under control. Dilantin was subsequently substituted experimentally with poor results and replaced permanently by phenobarbital.

Although feeble-mindedness was suspected from the first, it was not until the eighth month of hospitalization that a psychometric could be done; it indicated a mental age of 4 years.

The treatment plan in this case was the product of frequent conferences between the medical and nursing staffs. The clue to the successful management of John's behavior seemed to be his tremendous craving for affection and his readiness to form attachments. Perhaps he could be helped to develop inner controls through the judicious balancing of indulgence and firmness. This would be similar to the creation of "conscience" in a real family situation. The promise of love and indulgence and the fear of their withdrawal would lead him to choose approved as against unacceptable ways of behaving.

Great resourcefulness, watchfulness, patience and stamina were required to put this plan into effect. Fortunately, it was possible to give this child genuine affection because, despite his extraordinary behavior, he was appealing in appearance and pitiful in his neglect. He wanted love expressed

in direct ways—in lap-sitting, embraces and kisses. Because of his mental backwardness, verbal reproofs needed reinforcement by stern looks, decisive gestures and occasional manual restraint. Constant repetition of punishments and rewards were necessary before a new habit was established.

At all times, John was in someone's exclusive care. Because of the strenuous character of the work with this child, no nurse or attendant could be required to spend more than an hour at a time with him. Even this hour taxed the equanimity of the most patient person, and staff members who became fond of the boy frequently were seized with feelings of revulsion and rejection. That he could give cause for such feelings is attested by the instance of his expectorating into the mouth of an attendant, causing her to vomit. Nurses relieved their tensions by discussing with the psychiatrists and each other their hostility for the boy. Particular problems of management were discussed at regular staff conferences. The supervisors gave ready support and sympathy to the personnel in their attempts to adjust to this difficult situation.

John's first play interest was in dolls. Other children touched one of his collection at the risk of losing a handful of hair. Identifying himself with a baby doll, he remarked as tears ran down his cheeks, "Baby, I like you. I didn't mean to hit you. Mother will spank baby, but I will hang mother on a nail." (One of his complaints against the stepfather was that he had punished him by hanging him on a nail.) He was very clever at catching flies with his hands. He enjoyed the approval he earned when he fed captured flies to the turtles kept in the school room. He was fascinated by the common sounds about him, and he loved to produce strange noises himself. In the playground he took no part in group activities, but he sought attention by making noises and clowning. Laughter at his antics made him delirious with joy.

For a year the ward was his home, and his contacts with members of his family were infrequent. His mother, always harassed by home duties, was pregnant during a major part of the period of John's hospitalization. Her visits were always short. At first he wanted to go home with her, but later seemed content to let her go when a visit was concluded. She was demonstrative toward him in what appeared to be a genuinely affectionate way. She recognized the improvement in his behavior, seemed content to let him stay. The maternal grandmother, an excitable person, produced a sympathetic reaction in John when she came to visit. His father, whom he had never seen, visited him once, just before entering the army. The boy was shy at first but soon was sitting on his father's lap. Later he spoke proudly of his daddy to the other patients.

John greatly enjoyed the praise, affection and approval which were his rewards for acceptable behavior, but when these were withheld he indulged in long periods of forced crying and self-pity. He was willing to be taught new things by people he

liked. He learned to use politer terms for natural functions than those he brought into the ward. His attachment to the kitchen maid whom he often called "mama" was manifested by a willingness to help her with her work. The entrance of another child into the room at this time would arouse his jealousy. He formed a similar attachment to the cleaning maid. He helped her dust the ward and empty the wastebaskets (in which he would search for pennies). He would "make dust" by picking plaster loose from the walls or shredding cigaret butts. He explained: "Dust makes flies and flies are in all mothers' homes." The maid's success with John led to her reclassification as a ward attendant.

When John discontinued his habit of soiling and smearing, he began to show an interest in hand-washing and washing his toys. This produced new problems; he preferred the toilet bowl to the lavatory and he enjoyed flushing the soap down the toilet, resulting in frequent emergency calls to the plumber and a diminution of the soap supply. Locking the bathroom doors prompted him to steal soap and hide it until he could sneak into the bathroom. He was rewarded with pennies when he did not throw soap into the toilet, and after 3 months the trouble abated. Eventually he voluntarily gave up hoarded soap to the nurse or attendant with whom he had had a satisfactory play period.

By the fourth month of John's stay on the ward he was having many quiet days. The neutral packs

were discontinued, firmness on the part of nurses and attendants having become adequate as behavior controls. John showed greater interest in other patients, especially the older girls who sometimes assumed a parental attitude toward him. He cried because he was not permitted to sleep with them in the girl's dormitory.

He was taken on walks with the other children. In exchange for allowing him to run free, he agreed always to wait at the corner for the group to catch up with him. Once he ran off and disappeared. A wide search failed to find him, but 4 hours later he was seen, transfer in hand, waiting for a street car a short distance from the hospital. Very pleased with himself, he explained how he had used his store of pennies to ride the streetcars. He had had no intention of running away; as he transferred from car to car he had always kept the hospital tower in sight.

At the end of a year in the ward, John, although greatly improved, still required expert supervision. It was felt that he would benefit by a longer stay, but war-time staff shortages required his discharge, and he was transferred to a state hospital for the feeble-minded. When, 3 months later, the former ward supervisor of nurses visited him at the state hospital, there was no evidence that he had regressed from his stage of development at the time of discharge from the ward. Not long afterward it was learned that he had been paroled to his mother.



## CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: We have recently published data on the cerebral metabolic rate before and after pentothal anesthesia on man<sup>1</sup> in the AMERICAN JOURNAL OF PSYCHIATRY and on dog<sup>2</sup> in the *American Journal of Physiology*. One of the factors necessary to determine cerebral metabolic rate is cerebral blood flow. The other is arteriovenous oxygen difference. In our investigations we used the method of Kety and Schmidt<sup>3</sup> to measure cerebral blood flow. Kety *et al.*<sup>4</sup> have recently revised the formula for the calculation of cerebral blood flow for they changed the partition coefficient of nitrous oxide between

brain and blood and reduced its value from 1.3 to 1.0, thus rendering previous results 23% too high. Our results obtained from the venous blood containing the major part of the cortical return are therefore lowered to 3.0 cc O<sub>2</sub>/100 gm tissue/hour and for the blood containing the chief part of the subcortical contribution 2.1 cc O<sub>2</sub>/100 gm tissue/hour yielding an average of 2.5 cc/100 gm tissue/hour for the entire brain. This value is somewhat less than that of 2.8 cc O<sub>2</sub>/100 gm tissue/hour, the corrected average of Kety and Schmidt.<sup>3</sup> Assuming an oxygen intake of 250 cc per minute for the entire body, the fraction used by the brain is 14-16%, a value similar to that obtained by the Evans Blue Method.<sup>5</sup> We measured predominantly the cortical metabolism<sup>2</sup> in the dog with a corrected result of 4.5 cc O<sub>2</sub>/100 gm/min. If this observation is confirmed it will yield further support for the high metabolic rate of the cephalad end of the neuraxis. The percentage decrease in cerebral metabolic rate produced by potential sodium remains the same: 36% in man and 56% in dog.

HAROLD E. HIMWICH, M. D.

<sup>1</sup> Himwich, W. A., Homburger, E., Maresca, R., Himwich, H. E. Brain metabolism in man: Un-anesthetized and in pentothal narcosis. *Am. J. Psychiat.* 103: 689-696, 1947.

<sup>2</sup> Homburger, E., Himwich, W. A., Etsten, B., York, G., Maresca, R., Himwich, H. E. Effect of pentothal anesthesia on canine cerebral cortex. *Am. J. Physiol.* 147: 343-345, 1946.

<sup>3</sup> Kety, S. S., Schmidt, C. F. The determination of cerebral blood flow in man by the use of nitrous oxide in low concentrations. *Am. J. Physiol.*, 143: 53-66, 1945.

<sup>4</sup> Kety, S. S., Harmel, M. H., Shenkin, H. A., Schmidt, C. F. Nitrous oxide method for measurement of human cerebral blood flow. Experimental evaluation of fundamental assumptions. *Fed. Proc.* 6: 142, 1947.

<sup>5</sup> Gibbs, F. A., Maxwell, H., Gibbs, E. L. Volume flow of blood through the human brain. *Arch. Neurol. and Psychiat.* 57: 137-144, 1947.

## COMMENT

### THE NEW YORK MEETING

The several innovations in the program of the recent annual meeting are indicative of the wholesome changes which are taking place within the Association. This one hundred and third convention of the members was, to a considerable extent, the culmination of efforts which had their beginnings in 1945. In that year the Council appointed the Committee on Reorganization and authorized the establishment of The Psychiatric Foundation. During the New York meeting the members devoted themselves for a day and a half to the reorganization of the Association and for an entire afternoon to learning about The Foundation. Their energy and enthusiasm in evolving recommendations for the expansion of the Association's activities contributed considerably to the success of the meeting. The presence of 1666 members and 1996 nonmembers gave evidence of the growth of the Association and the increased interest in psychiatry.

Other innovations which were introduced during the meeting included the giving of first place on the program to the Presidential Address and a more dignified arrangement for the election of officers. Dr. Samuel W. Hamilton's address might well be described as a "Report on the State of the Union." With his gift for presenting things clearly and in their proper setting his address was in every respect a perfect prelude for the sessions which were to follow. The arrangements he made for the election of of-

ficers provided ample opportunity for every member to cast his ballot and they seemed like a wholesome departure from the previous customary procedure.

The addresses by Dr. Brock Chisholm, Secretary of the Interim Commission to The World Health Organization, and Dr. John R. Rees of London, England, served to make the international aspects of psychiatry more meaningful and stimulated interest in the International Mental Health Congress in 1948. Among the 694 members and guests who attended the banquet quite a number expressed their intention of going to London for this meeting next year. There were 822 members who made dinner reservations for the round table meetings, and the scientific presentations had seemingly larger audiences than in the previous years.

In addition to the scientific value of the meeting and the pleasure of visiting with colleagues a great deal was accomplished in behalf of an expanded program. There is good assurance now that the Association will assume a more active leadership in the field of psychiatry than at any previous time within its history. This cannot come about, however, without a considerable assistance from the membership. Those who attended the New York meeting have initiated a program which now needs to be implemented by the entire membership.

LEO H. BARTEMEIER, *Secretary*.

### JUVENILE DELINQUENCY IN GREAT BRITAIN

The British Information Services have recently issued a pamphlet giving figures on juvenile delinquency in Great Britain during World War II. In contrast to the first world war, during which delinquency rose steadily until peace came, the figures show a constant or a decreasing rate of juvenile delinquency after the first marked increase in 1940-41. This period coincided with the period of continuous air raids, with evacua-

tion movements, and with absence from home of older people. Thus, wartime conditions aggravated the peacetime causes of delinquency. These had been studied carefully by the London School of Economics, which compared a group of 1,000 delinquent boys with a control group of children of the same age and from the same schools who had never come before the courts. Significant differences between these groups were found

in the realms of parental controls, school attainments, and broken homes. The effect of the war upon these factors is obvious. Thirty percent of all juvenile offences in London during peacetime were committed during the hours of darkness; wartime blackout conditions naturally increased the intensity of darkness and offered more opportunity for "breaking and entering," which accounted for three-fourths of all the indictable offences with which children and young persons were charged in the Juvenile Courts. Because of evacuations and the destruction of schools, school attendance became irregular, and many children were brought before the courts who had not been in school since the war started. The abnormal home conditions that resulted from evacuation, destruction of homes in target areas, life in air-raid shelters, absence of parents in the services and in war work contributed to the rise in juvenile delinquency, as did the general wartime restlessness and strain. Facilities to handle juvenile delinquents were naturally overburdened during the war years.

The number of delinquents in proportion to the total number of young people under 17 was very small, ranging in various years and age groups from 0.8% to 1.6% for boys, and never exceeding 0.19% for girls. This may have been due to the concerted

efforts that were made on many fronts to prevent delinquency. Youth services providing both social life and recreative work were extended during the war, with government financial aid for expenditures on premises, equipment, and trained leadership. Pre-Service training organizations, reaching down to the 13-year-old age group (which is the group with the highest delinquency rate) have had phenomenal success. The school-leaving age was raised; welfare schemes for young industrial workers were instituted; the schools became social centers. New training schools for delinquents have been established, and these have been supplemented by foster home care. Parental responsibility for children's behavior is being stressed: many Juvenile Courts are now held in the evening so that working fathers may attend, and some local authorities are running classes for fathers in child care. Parents' associations are increasing. Better training in youth problems and psychology has been recommended for the Clerks of the Court, the legal advisors to the justices. The probation system has steadily improved, and use of it has greatly increased. There is a growing public interest in such matters as housing, community centers, and the prevention of unemployment; and local surveys of juvenile delinquency stress the necessity of tackling the basic causes of delinquency by means of basic social reforms.

## NEWS AND NOTES

**DR. HAMILTON TAKES OVER NEW JERSEY HOSPITAL.**—The President of The American Psychiatric Association for 1946-47 was recently appointed superintendent of the Essex County Hospital, Cedar Grove, New Jersey, and assumed his official duties July 1, 1947. This hospital is an institution accommodating about 2,500 patients and enjoys an outstanding reputation. Dr. Hamilton joins its staff after 11 years with the United States Public Health Service in Washington, during which he made surveys of mental hospitals and state services throughout the country.

Dr. Hamilton's predecessor at Cedar Grove was Dr. Guy Payne, who had served as superintendent of the hospital for 30 years and was responsible for the excellent standing it had attained.

**AMERICAN ASSOCIATION ON MENTAL DEFICIENCY.**—At the 71st annual meeting of the American Association on Mental Deficiency held in St. Paul May 27-31, the following officers were elected: President, Dr. Lloyd Yepson; President-Elect, Dr. Edward J. Humphreys; Secretary-Treasurer, Dr. Neil A. Dayton; Editor of Journal, Dr. Edward J. Humphreys.

Final plans were outlined for the First International Congress on Mental Deficiency, which will be held in Boston at the Hotel Statler, May 11-15, 1948. It is anticipated that there will be delegates and speakers from North and South America, the British Isles, Europe, Australia, and New Zealand. The chairman for the Committee on Arrangements is Dr. C. Stanley Raymond.

**INTERNATIONAL CONGRESS ON MENTAL HEALTH.**—In the summer of 1948 there will take place in London an International Congress on Mental Health. Conferences will cover the subjects of child psychiatry, medical psychotherapy, and mental hygiene. Dr. J. R. Rees is chairman of the organizing committee. Dates of the Congress are August 12 to 21, 1948. Requests for information about the Congress should be addressed to the Organiser, International

Congress on Mental Health, 39 Queen Anne Street, London, W. 1, England.

**SECTION ON PRIVATE PRACTICE OF PSYCHIATRY.**—All members of The American Psychiatric Association who wish to join the recently established Section on the Private Practice of Psychiatry and whose names do not already appear in the Biographical Directory of the APA published in 1941 are urged to send their names and principal biographical data to the secretary of the section, Dr. J. G. N. Cushing, 11 East Chase St., Baltimore 2, Md. The chairman of the section, Dr. Wendell Muncie, announces that they wish to compile a list of all the active workers in the private practice of psychiatry and would appreciate having information from these workers as to whether hospital facilities are available to them for their own treatment of their patients.

**MILITARY CITATION, CAPT. F. L. McDANIEL (MC), USN.**—For outstanding work done in construction, organization, and command of the San Leandro Naval Hospital, San Leandro, Calif., during the war, Capt. Frederick L. McDaniel of Alexandria, Virginia, has recently been awarded the Commendation Ribbon by the Secretary of the Navy, Honorable James Forrestal. The San Leandro Hospital was one of the institutions that received many patients for special treatment in connection with war psychoneurosis of combat origin.

**PHILADELPHIA PSYCHOANALYTIC SOCIETY.**—At its annual business meeting on June 14, 1947, the Philadelphia Psychoanalytic Society elected officers for the year as follows: President, Dr. LeRoy M. A. Maeder; Vice-President, Dr. George W. Smeltz; Secretary-Treasurer, Dr. Robert S. Bookhammer.

**NORTH PACIFIC SOCIETY OF NEUROLOGY AND PSYCHIATRY.**—The following officers were elected at the 1947 meeting of the North Pacific Society of Neurology and Psychia-

try: President, Dr. Frank Turnbull; President Elect, Dr. Herman A. Dickel; Secretary-Treasurer, Dr. Gerhard B. Haugen. Four members of the Executive Committee were elected: Dr. Ryle Lewis, Dr. Gordon Hutton, Dr. S. N. Behrens, and Dr. Ralph Stoltzheise. The constitution was revised to make American Board Certification or eligibility for such certification a prerequisite for Fellowship. The 1947 meeting will be held at Vancouver, B. C., the latter part of March.

**RESIDENCY TRAINING PROGRAM, NORTH LITTLE ROCK, ARKANSAS.**—The American Medical Association and the American Board of Psychiatry and Neurology have approved the Veterans Administration Hospital, North Little Rock, Arkansas, for 15 residents for a 3-year training period in psychiatry. In addition to officers of the VA Hospital, the teaching staff is drawn from the University of Arkansas School of Medicine and from Washington University School of Medicine, St. Louis. Residents will be accepted for training on July 1 and January 1 of each year, with an annual stipend of \$3,000 for physicians who served as medical officers during World War II and an annual stipend of \$900 to \$1,800, plus subsistence, for others. Those interested should write to Dr. H. W. Sterling, manager of the hospital.

**INTERNATIONAL CONFERENCE OF PHYSICIANS.**—The Royal College of Physicians is arranging an International Conference of Physicians to be held in London during the week of September 8th to 13th, 1947. The Conference will be divided into the following sections: cardiology, dermatology, disorders of the chest, general medicine, neurology, pediatrics, psychiatry, and social medicine. Admission to the conference is confined to medical practitioners and is by ticket only. Dr. G. B. Mitchell-Heggs, Royal College of Physicians, Pall Mall East, London, S. W. 1, is the organizing secretary.

**INTERNATIONAL CONFERENCE ON PSYCHOSURGERY.**—An international congress on psychosurgery will be held in Lisbon in April, 1948, at the invitation of the Portu-

guese Government and the University of Lisbon. Chairman of the United States Committee is Dr. Walter Freeman, 2014 R St., N. W., Washington 9, D. C.

**ELECTROSHOCK RESEARCH ASSOCIATION.**—At a meeting on May 20, 1947, the Electroshock Research Association elected the following new officers: President, Dr. Nathan K. Rickles; Vice President, Dr. Emerick Friedman; Secretary-Treasurer, Dr. Paul H. Wilcox; and Councillors, Dr. Ernest A. Spiegel and Dr. Esther Bogen Tietz.

**MEETING OF COURT PSYCHIATRISTS.**—In conjunction with the 1947 annual meeting of The American Psychiatric Association, Dr. Leo L. Orenstein, Psychiatrist-in-charge at the Psychiatric Clinic of the Court of General Sessions, New York, N. Y., arranged for a meeting of court psychiatrists from various parts of the country. The first of such meetings had been held in Chicago in 1946, when Dr. William H. Haines of the Behavior Clinic of the Criminal Court of Cook County was host to psychiatrists interested in forensic aspects of the specialty.

This year the meeting was held May 19, in New York City. Dr. Orenstein was host at a dinner which was followed by a discussion of two important problems in court psychiatry: one, the function of the psychiatrist in the court, and two, the problems of juvenile delinquency. Eighteen psychiatrists and one probation officer attended the meeting and several judges from the Criminal Courts in New York were invited. Four outstanding judges did attend and participate in the discussions. They indicated a need for expansion of psychiatric facilities in courts and emphasized the value of therapeutic possibilities. At present, very few Court Clinics in this country are equipped with adequate personnel and other facilities to carry on organized treatment.

Because of the success of this meeting and the previous one in Chicago, it is believed that, in the future, meetings each year at the time of the annual convention of the APA would be of great value in improving conditions in Court Clinics.

**NATIONAL ASSOCIATION FOR THE EMPLOYMENT OF THE HANDICAPPED.**—This voluntary association was recently organized and incorporated with its office at 1026 17th St., N. W., Washington, D. C. It is taking over the work that was done by the Retraining and Reemployment Administration, Department of Labor, in the last two years in promoting the employment of handicapped people. The scope has been broadened to include mentally as well as physically handicapped persons.

**DEPARTMENT OF REHABILITATION AND PHYSICAL MEDICINE.**—At the New York University College of Medicine, under the direction of Dr. Howard A. Rusk, a new Department of Rehabilitation and Physical Medicine has been set up. It will train medical students in the so-called third phase of medical care: preparing the patient to go from bed to the job. Patients in Bellevue and other municipal hospitals will be the first to benefit from the new department, under an arrangement with the Department of Hospitals.

**VOCATIONAL REHABILITATION.**—Under a grant from the Commonwealth Fund, plans have been worked out whereby the Division

of Rehabilitation of the National Committee for Mental Hygiene can carry on for at least a two-year period a project in the vocational rehabilitation of people whose mental or emotional problems have constituted a vocational handicap. The Division will work in close cooperation with the Federal Bureau of Vocational Rehabilitation and also with the State Bureaus of Vocational Rehabilitation in Connecticut, Michigan, and New York. The project will be carried on in different types of communities: a large city, smaller urban centers, and rural areas.

**NEED FOR CHILD GUIDANCE CLINICS.**—The recent annual report of the National Committee for Mental Hygiene calls attention to the following facts: There are 25 states in which not even one child guidance psychiatric clinic is in existence; in the entire country there are less than 400 clinics. In the year 1946, between 250,000 and 400,000 teen-agers passed through our juvenile courts, whereas only 50,000 boys and girls could get help from child guidance clinics. America really needs at least 1,400 full-time community clinics, but, although many communities have the funds to open such clinics, the lack of trained personnel is a serious deterrent.

### THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

The following were certified at Philadelphia, Pennsylvania, May 15-16-17, 1947.

#### PSYCHIATRY

(By Examination)

Adelman, Solcmon, Veterans Hospital, Northport, N. Y.  
 Argent, Albert H., Veterans Administration, Marion, Ind.  
 Bagenstose, Clinton Harry, Payne-Whitney Clinic, OPD, 525 East 68th St., New York, N. Y.  
 Baker, James Louis, U. S. Public Health Service Hospital, Fort Worth, Tex.  
 Baumann, Milton Charles, Veterans Hospital, Minneapolis, Minn.  
 Beamer-Maxwell, Eleanor, Eastern State Hospital, Williamsburg, Va.  
 Beckman, William Peter, South Carolina State Hospital, Columbia, S. C.  
 Belisle, John A., Wayne County General Hospital, Eloise, Mich.  
 Bell, H. Craig, Abington Memorial Hospital, Abington, Pa.  
 Bennett, Raymond J., 7256 Medical Arts Bldg., Tacoma, Wash.  
 Bernstein, Nathan K., Room 518, Gas & Electric Bldg., Utica 2, N. Y.  
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 Boshes, Louis D., 912 South Wood St., Chicago, Ill.  
 Buscaglia, Chris J., State Hospital, Ypsilanti, Mich.  
 Bush, Stuart K., Colorado Psychopathic Hospital, Denver, Colo.

Cameron, Dale Corbin, U. S. Public Health Service Headquarters, Washington, D. C.  
 Cammarata, Joseph Anthony, State Hospital, Dixmont, Pa.  
 Campbell, Howard R., 1112 Third National Bldg., 32 N. Main St., Dayton, Ohio.  
 Carlisi, Dominick J., Pilgrim State Hospital, West Brentwood, N. Y.  
 Chandler, Arthur L., Veterans Administration N. P. Hospital, Los Angeles, Calif.  
 Coburn, Frank E., Psychopathic Hospital, Iowa City, Iowa.  
 Cogan, Samuel, Station Hospital, Ft. Hamilton, Brooklyn, N. Y.  
 Cohen, Max, Veterans Hospital, Coatesville, Pa.  
 Colley, Arthur T., Veterans Administration, Lyons, N. J.  
 Crandell, C. Archie, New Jersey State Hospital, Grey-stone Park, N. J.  
 Cruvant, Earnard A., St. Elizabeths Hospital, Washington 20, D. C.  
 Davis, C. Nelson, 133 South 36th St., Philadelphia, Pa.  
 deAguilar, Alcinda P., Veterans Administration Hospital, Bedford, Mass.  
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 Flumerfelt, John M., University Hospitals, Cleveland 6, Ohio.

- Foster, David Bernard, Menninger Foundation, Topeka, Kans.
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- Greiber, Marvin F., 420 West Washington St., Muncie, Ind.
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- Hirschfeld, Gerhard, State Hospital, Norwich, Conn.
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- Hubbard, Oscar E., Room 1507, 1114 Commerce St., Dallas, Tex.
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- Hurley, James B., 324 East Wisconsin Ave., Milwaukee, Wis.
- Jackson, George W., State Hospital, Little Rock, Ark.
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- Johnson, Franklin, Wayne County General Hospital, Eloise, Mich.
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- Kaldeck, Rudolph, c/o Boston State Hospital, Boston, Mass.
- Kaplan, Julius Arthur, Veterans Administration, Northampton, Mass.
- Kesselman, Samuel R., 681 Clarkson Ave., Brooklyn, N. Y.
- Kimbell, Isham, Jr., Veterans Administration, Fort Custer, Mich.
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- Mahoney, Vincent P., Pennsylvania General Hospital, Philadelphia, Pa.
- Manno, Joseph A., State Hospital, Central Islip, N. Y.
- March, Thomas A., Station B., Poughkeepsie, N. Y.
- Marder, Samuel H., 419 Commonwealth Ave., Boston, Mass.
- Marshall, Joseph H., Springfield State Hospital, Sykesville, Md.
- \*Masland, Richard L., Bowman Gray School of Medicine, Winston-Salem, N. C.
- Mayer, Frederick, 233 East Madison Street, Louisville, Ky.
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## BOOK REVIEWS

THE PSYCHOLOGY OF WOMEN, Volume I, By *Helena Deutsch, M. D.* (New York: Grune & Stratton, 1944.)

The need for this book and the general appreciation of its value is indicated by the fact that it had gone into its fifth printing at the time of the appearance of its companion volume. It is the first book in which all the pertinent information about the normal psychic life of women and their normal conflicts have been brought together. For this reason alone it constitutes a great practical contribution to psychiatric literature. This volume comprises the final conclusions of 30 years of clinical investigation into the problems of feminine psychology by the foremost worker in this particular field.

The material of this book is not restricted to the personal observations of the author. It is enriched by data taken from reliable cases and life histories recorded by other physicians, routine hospital records, the files of various social agencies, and contributions from creative literature. The author does not analyse the determining importance of the social milieu and the biological factors in relation to the psychological manifestations, but throughout the book she emphasizes the individual emotional experiences and conflicts connected with them. This predominantly clinical point of view has particular value for illustrating the development of the feminine psyche.

Dr. Deutsch deals with three principal themes which are intimately related to each other. The first of these is the exposition of the psychological life of woman starting with the young girl's development into womanhood. The second is the analysis of the foundations of the feminine personality, and the third is a discussion of the nonfeminine aspects of femininity. The last 3 chapters deal with this problem.

Dr. Deutsch divides the psychological development of the girl into prepuberty, early puberty, puberty, and adolescence. She describes and discusses in a wealth of detail the changes which are characteristic for each of these periods of development. In this way, the reader is presented with the various factors which contribute to the gradual evolution and establishment of the 3 essential traits of femininity. They are narcissism, passivity, and masochism, and the author devotes a special chapter to each of these fundamental traits. The author has wisely chosen to deal with the subject of motherhood, which she regards as the central problem of femininity, in a companion volume.

In the opinion of this reviewer, both of these volumes are rapidly establishing themselves as standard text books for all who are seriously interested in obtaining adequate understanding of feminine psychology.

LEO H. BARTEMEIER, M. D.,  
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CLINICAL PSYCHOLOGY. By *C. M. Louttit.* (New York: Harper and Brothers, 1947.)

This is the revised edition of a widely used elementary textbook designed for the instruction of students of clinical psychology. For the most part it deals with the adjustment problems of children and is not concerned with deviant behavior in adults. The author's broad conception of the scope of clinical psychology is indicated by his statement that it "is not, and cannot be, limited only to psychology as its basic science. Rather the work of the clinical psychologist is intimately bound up with at least four major fields, viz., psychology, medicine, education and sociology."

In accordance with this broad conception, a great variety of topics are surveyed including not only emotional disturbances and school difficulties but also the behavioral consequences of neurological disability, sensory defect, chronic disease, etc., with brief descriptions of the underlying fundamental condition. Because of this wide coverage, the treatment of most topics is necessarily somewhat sketchy. However, there are few inaccuracies and the salient features of each condition are well described. Within this framework of brief considerations, the occurrence in the body of the text of numerous references to and citations of the literature ("Smith says," "Jones found," "Brown demonstrated," etc.), while undoubtedly useful to some readers, makes for a rather tedious style.

The author's ideas about treatment tend to emphasize "direct" methods such as environmental manipulation and habit training, and only passing attention is paid to analytically oriented expressive treatment. The suggested treatment of enuresis, in which restriction of liquids in the latter part of the day, awakening at specified times of the night, and the use of "star" charts play the major rôle, may be cited as an illustration.

The features of the work that will probably be of greatest interest and value to psychiatrists are the excellent chapters on psychometric methods and specific educational disabilities. The volume will continue to serve a very useful purpose as a source of elementary factual information concerning clinical problems. It will be somewhat less useful, the reviewer feels, as a description of modern conceptions of treatment.

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THE WISCONSIN PRISONER, By *John Lewis Gillin.* (Madison: University of Wisconsin Press, 1946.)

This book reports a research carried out by the professor emeritus of sociology in the University of Wisconsin upon 486 prisoners in the Wisconsin State Prison at Waupun. The types of prisoners

especially studied were the murderers, the sex offenders, and the property offenders. As controls, the noncriminal brothers of the criminals were used.

In regard to the murderers, the following conclusions were drawn from the study. The potential murderer is one whose fundamental wishes have been frustrated at some period in his life. More than 30% of the murderers were drunk at the time of the crime or at least had been drinking. Almost 26% either were insane when they committed the murder or became insane after incarceration. About 6% were psychopathic. A larger proportion of the murders than of the sex offenders and property offenders came from a farm environment. Of the murderers, 47.1% were born of foreign parentage, as compared with 29.2% of the property offenders and 27.7% of the Wisconsin population. The lifers included a larger proportion of mental cases than did the other two classes, most of them being afflicted with dementia præcox and paranoid tendencies. Most murders are crimes of passion—explosive reactions to a difficult situation.

Sex offenders studied fell into 3 groups: homosexuals, cases of incest, and cases of rape. Conclusions drawn in regard to the first group are that "overt homosexuality is attributable to physical and mental traits which repelled women, to seduction early in life, or to economic circumstances which precluded heterosexual relations, either lawful or illicit. Most of them had either lost status altogether or had failed to attain it in a law-abiding group. Almost all had demoralized associates, and many had been debilitated by excessive drinking whatever inhibitions they may once have had. All of them, whether of low or high intelligence, have a history of emotional frustration, some of social example and incitement to perversion."

To one brought up in the tradition of British law, it is surprising to learn that sexual relations with a stepdaughter is considered incest in Wisconsin. This study reveals that 51% of those guilty of incest were mentally defective. The other significant factor in cases of incest was lack of emotional control. Sexual assaults on children were found to be committed usually by mentally unsound degenerates of the lowest order.

Under the heading of property offenders, there were included cases of arson, larceny, breaking and entering, burglary, forgery, armed robbery, and embezzlement. More than 73% of the arsonists were mentally defective, and more than 48% were farmers. The motives of the arsonists were desire for revenge, hope of collecting insurance, and pyromania. The author remarks that the number of forgers who commit the same crime again and again is striking. The bank robbers, embezzlers, and forgers constituted the intellectual aristocrats of the prison population. The average intelligence of the embezzlers was higher than that of any group in the prison. The author makes the comment that "in every community there are some business men who violate the strict standard of the statutes—Sutherland's so-called white-collar criminals."

In his final chapter the author summarizes his data in the following formulation:

(1) Conditions that seem to create a hazard:

low income of the parents, inferior intelligence, insanity, drunkenness, and disharmony in the home.

(2) Conditions hazardous unless offset by other influences: early termination of school, frustrations, feeling of inferiority, loss of self-esteem, and antisocial companions.

(3) Commonest precipitating factors of crime: threats to economic security, to emotional security, and suggestion from unscrupulous associates.

This is an extremely valuable and interesting contribution to the study of crime and well repays a careful reading. Throughout the book the author pays lip-service to Freudian nomenclature by making an altogether unnecessary use of such terms as mother fixation and Oedipus complex to denote the quite ordinary and usual affection of a son for his mother. However, the author quotes Havelock Ellis as contending that only by the very greatest accommodation of language can this emotional attraction to the mother be said to be of a sexual nature.

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#### NURSE-PATIENT RELATIONSHIPS IN PSYCHIATRY.

By *Helena Willis Render, R. N.* (New York: McGraw-Hill Book Company, Inc., 1947.)

"Nurse-patient Relationships in Psychiatry" answers a great need, long felt in the field of psychiatric nursing, for a text which would stress the importance of this aspect of the work. The principles underlying, and essential to, a knowledge of the subject are discussed fully in a straightforward and practical manner.

The book does not deal with clinical psychiatry nor nursing skills in the main but considers these subjects as they touch the primary nursing procedure, the management of the patient in action. The approach to the patient as a sick individual is covered completely in carefully developed discussion which will appeal to the student and gives to the instructor an excellent teaching outline. Diagnosis is not considered essential to good psychiatric nursing, and this comes as a boon to the teacher who must strive constantly to keep her classes free of technical discussions and devoted to the nursing care of the sick individual.

A full chapter is given over to a discussion of art, music, and literature in the life of the nurse and the patient. This is a new departure in the texts of psychiatric nursing and one which will have a valuable place. The usual glossary of terms is included but is developed to follow the "Outline of Observation of Behaviour" given earlier in the book.

This book is a very successful attempt to place before the student a practical aide to the improvement of nursing care and to the understanding of human relations. It has breadth and vision and should not grow old as techniques change but will remain basic. It will be a valuable addition to the library of every school of nursing.

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# THE AMERICAN JOURNAL OF PSYCHIATRY

## THE PSYCHIATRIC FOUNDATION<sup>1</sup>

### INTRODUCTORY REMARKS

LEO H. BARTEMEIER, M. D., DETROIT, MICH.

On behalf of the Board of Directors of The Psychiatric Foundation, I take this occasion to express our thanks to the Council and to the Committee on Program for this opportunity to make the first public presentation of the aims and purposes of the Foundation. Those who are directing the work of your Foundation are also most appreciative of the generous support which you have provided through your individual contributions. With your kind permission I will try to draw a thumb-nail sketch of the history of the Foundation.

At a special meeting of the Council of The American Psychiatric Association in February, 1945, the first outlines of the Foundation were suggested by the Executive Assistant, Mr. Austin M. Davies. At that time, Council was discussing the recommendations of the Committee on Reorganization, under the chairmanship of Dr. Karl Menninger. Dr. Menninger and his committee had emphasized the need for the expansion of the program of the Association, particularly in the fields of research and of improvement in the standards of mental hospitals.

In his report, Mr. Davies expressed his belief that these plans would require large sums of money and that in order to obtain them, we should establish a program not primarily intended "as a development within the Association, but rather without the Association." He outlined the general principles of a non-profit foundation, indicating his belief that its value might be comparable to similar organizations, such as the American Cancer Society and the National Foundation for Infantile Paralysis. He suggested that Dr. Karl Bowman, the then President of the Association, appoint a committee to study the problem.

At the next regular meeting of the Council in December, 1945, Mr. Davies presented a second and a more factual report concerning how the Foundation might be formed and some of the aims it might accomplish. After much discussion of the report, "it was voted on motion of Dr. Ruggles, seconded by Dr. Hamilton, to authorize the filing of a certificate of incorporation for the Foundation, the appointment by the President of the Committee on Planning and one on Statistical Information relative to the Foundation, and the underwriting of the Foundation by the Association up to \$2,000." This motion was duly passed and the following committee was appointed which, in cooperation with Mr. Davies, was to carry out the motion of Council: Dr. Edward A. Strecker, Chairman, and Doctors Harry C. Solomon, Gregory Zilboorg, M. A. Tarumianz, Winfred Overholser, and C. C. Burlingame.

A legal firm was engaged and the preliminary drafts of the constitution and by-laws were made. The by-laws were discussed with Dr. George Stevenson, of the National Committee for Mental Hygiene.

On March 9, 1946, the first draft of incorporation was submitted at a meeting of the Committee on Planning for the Foundation. The proposed articles of incorporation were studied in detail and it was agreed to name the organization The Psychiatric Foundation, and to set the maximum number of directors at 75. In response to an invitation from the Josiah Macy, Jr. Foundation, through the kindness of Dr. Frank Fremont-Smith, an informal discussion was held with representatives of the National Committee for Mental Hygiene.

During the annual meeting of the Association in 1946 the Foundation was referred to by Dr. Karl Bowman in his Presidential Address. He pointed out the need for psychiatry to be more bold and to plan both in program and in raising funds and to extend

<sup>1</sup> This address and the 3 following were presented as a symposium at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

its activities. He indicated that this could best be done through the medium of the Foundation.

At a meeting on June 13, 1946, an election of directors was accomplished by elevating the members of the Planning Committee to the Board of Directors. It was decided that the Directors should serve for terms of one, two, and three years. It was also decided that the majority of the Board of Directors should be laymen, industrialists and businessmen, with possibly 25 percent medical men.

The next action taken was the formation of the Medical Advisory Board. According to the by-laws, the majority of the Medical Advisory Board must be physicians duly certified by the American Board of Psychiatry and Neurology. Thereupon, the following persons were nominated and elected as members of the Medical Advisory Board: Doctors Karl M. Bowman, Frederick W. Parsons, Edward A. Strecker, Arthur H. Ruggles, Winfred Overholser, Harry C. Solomon, Gregory Zilboorg, C. C. Burlingame, M. A. Tarumianz, Leo H. Bartemeier.

At this meeting approval was given for the President of the Foundation to send a letter to all the members of The American Psychiatric Association, explaining the aims and purposes and asking for donations. This letter was sent out with gratifying results. Shortly thereafter, the American Neurological Association also sponsored The Psychiatric Foundation and granted permission for the same letter to be sent to their members. As a result of this appeal, there has been received a total of \$12,243.72 from 1,011 psychiatrists and neurologists, as of March 31, 1947.

The next meeting of the Board of Directors was held on January 4, 1947. Dr. Israel Wechsler was elected to the Medical Advisory Board of the Foundation and the following were elected to membership on the Board of Directors: Mr. Pierre S. duPont III, of Wilmington, Delaware, Mrs. Louis S. Gimbel, Jr., of New York City, and Dr. H. W. Elley, of Wilmington, Delaware. The Board approved the sending of another letter to the members, requesting names of lay people in their communities, known to be

interested in psychiatry. The results of this letter were excellent in that the Foundation now has over 3,000 names.

Perhaps the most significant and outstanding action taken at this meeting on January 4 was the approval of the request of the Council of The American Psychiatric Association for a grant of \$10,000 for a preliminary study of the problem of rating and inspection of mental hospitals. In spite of the limited funds of the Foundation, the Directors felt that this project was so urgent and necessary to the field of psychiatry that the money was duly allocated. We are glad to report that through the generosity of two lay people, the Foundation has the \$10,000 on hand for this purpose, and the study is proceeding under Dr. Tarumianz, Chairman of the Committee on Standards and Policies. The Council also made application to the Foundation for a grant of \$70,000 a year for the next three years to carry out the program for rating and inspection of mental hospitals. The Board of Directors approved this application in principle and expressed the hope that the Foundation can raise sufficient money to finance this worthy project.

At the last meeting of the Board of Directors of the Foundation on April 8, it was decided that only a limited budget should be allowed for the office and that paid personnel should be secured as money and conditions permit. It was also decided that the program of the Foundation at this stage should be limited to education and fund raising and the carrying out of the promise to The American Psychiatric Association of the funds for the rating and inspection of mental hospitals.

On May 16, the Josiah Macy, Jr. Foundation, represented by Dr. Frank Fremont-Smith, arranged for a meeting of representatives of the National Committee for Mental Hygiene, the National Mental Health Foundation, The Menninger Foundation and The Psychiatric Foundation. Three representatives of The Psychiatric Foundation attended this meeting. A second meeting of the Foundations has been scheduled and it is anticipated that in the future foundations for mental health will work together to prevent overlapping of effort, confusion and conflict. It was the consensus of opinion that the

Foundations should create a separate instrument in the nature of a Federation for the purpose of collecting funds. Each foundation will retain its identity but all will pool their efforts. It is also the purpose of these meetings to exchange ideas, to keep each other informed regarding our activities and

our plans in a spirit of wholesome collaboration.

It is our belief that the Foundation is the financial backbone of our Association, and we hope that many projects can eventually be implemented by it without the necessity for turning to other sources for assistance.

## THE FOUNDATION AND THE AMERICAN PSYCHIATRIC ASSOCIATION<sup>1</sup>

ARTHUR H. RUGGLES, M.D., PROVIDENCE, R. I.

Almost from time immemorial, man's aim for man has been the sound mind and the sound body. Over the generations, vast sums of money have been spent in acquiring the sound body, and much has been accomplished in this direction, and the story of the quest for physical health is written throughout the history of the world. Pitifully small amounts of money have been spent in developing and preserving the sound mind, and what a pathetic picture we witness when we see mankind sound in body, but with mind so enfeebled and so useless, that the individual has to be cared for over long periods of years at the great expense of money and manpower, in the form of doctors and nurses and many other employees of mental hospitals.

For over one hundred years, from the days when thirteen noble mental hospital superintendents formed an association called Association of Medical Superintendents of American Institutions for the Insane, and on through the period when it was called the American Medico-Psychological Association, up to and through the period when it has been known as The American Psychiatric Association, many able and devoted psychiatrists, banded together in an organization which now numbers well over four thousand members, labored for the better care and earlier recognition of mental disease. But the results, compared with the magnitude of the problem, have been pitifully small. Psychiatrists gathered at an annual meeting, presented papers regarding their work, suggestions concerning the meeting of new problems, and the plans for new hospitals and better psychiatric education. But again let me repeat, that in comparison with the vast numbers of sick minds involved, the progress was necessarily slow, halting and, from the broad point of view, ineffective. For far too great an extent we are still waiting until the horse is stolen before we lock the barn.

Psychiatry was, for too many years, known as the "Cinderella of Medicine," and had great difficulty in forwarding its place as an integral and essential part of the medical picture. It is only within fifty years that we have learned the cause and the treatment of one mental disease, general paresis; and it is only for a shorter period of time that methods of discovering what was going on within the cranial cavity have been devised and utilized. The American Psychiatric Association Journal contains the evidence of many earnest and independent efforts, not only to improve the care of the mentally ill, but to further differentiate the various disorders and gradually to think in terms of understanding the underlying dynamics of mental disease.

Years of study by many able committees have gathered much scientific material and presented much of it over the years, but because of lack of funds, we have not been able to put into action many of these valuable findings. We must have active implementation of committee recommendations, and this can only be done by central organization with money available.

Members of our Association acting as psychiatrists in World War I began to point out that some mental illness could be prevented, and that others, by early recognition and active treatment, could be promptly relieved, but still we were making a pitifully small contribution toward the great problem of the neuroses and psychoses. Up to 1932 the development of The American Psychiatric Association was in the hands of a president, secretary, a council and various committees; with the mechanics of the work of the officers and committees carried on part time in the personal office of the secretary of the Association. Because of limited finances the committees seldom met more than once a year; the Council, twice a year. All of the officers and committee members were hard working psychiatrists, with the problem of earning their daily bread constantly upon

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

them. They worked overtime, especially the secretaries, in order to prepare for the meetings, arrange for committee reports, and for the publication of the JOURNAL. In October 1932, the Association appointed an executive secretary (Mr. Austin M. Davies). At that time, the total membership was approximately 1400, and the total funds in hand just over \$26,000, a noble amount to have saved out of small income, but much of it had been saved at the expense of not having more active committee work and not developing our Association to a position of strong aggressive leadership on a nation-wide basis.

In the succeeding fifteen years, our organization has more than trebled in size. Our treasury balance now remains only a little more than \$42,000. During that period, added expenditures have been made for more frequent committee meetings and for maintaining a central office with a permanent staff, but still we were not doing much toward strong national action, comparable to many of the national health associations that we have seen forging ahead in their development and in their preventive work.

As I look back upon many of the great figures in our Association, I sometimes wonder that so relatively few psychiatrists with so woefully inadequate amount of time that they could give to the work of the Association, and almost no money, accomplished as much as they did. While industry, transportation and communications have, in the past fifteen years, been streamlined, we have plodded valiantly along, almost literally, in the "one horse shay" of the famous Dr. Oliver Wendell Holmes' days.

I think I can talk freely because I was one of those who, as secretary for four years, and as president for one term, had a good deal of the driving to do, and if I am making unjust criticisms, they are aimed at myself as strongly as anyone. As I look back upon my own days of official service, I am again amazed that I was able to steal as many hours, after long, hard days in my own professional assignment, to keep the affairs of the Association going as well as they did. We have grown larger and potentially strong, but the time has come and, in my opinion, is now much overdue, for strengthening our sinews of war and placing much

of the responsibility for forwarding our cause upon paid, fulltime professional leaders. In general, physicians are noted as being poor business men. We must, I believe, join forces with many enlightened citizens from all walks and callings to develop a strong foundation, richly endowed, wisely planned and scientifically directed. This brings us directly to the consideration of the Psychiatric Foundation.

I think every member of The American Psychiatric Association can agree that there is a vast amount of educational, preventive and therapeutic work ahead, which cannot possibly be met without the assistance of more fulltime, skilled, paid workers. I believe, also, that we can agree that the direction of this work should be in the hands of experienced, specially trained psychiatrists. That group, of course, is to be found in our Association. If we were to attempt to meet the future needs in the field of nervous and mental disease with our own extremely limited funds, even if our dollars were doubled or trebled, it would still be totally inadequate. Therefore, it seems to me the answer is a Psychiatric Foundation, inaugurated by the members of our Association and controlled by a Board of Trustees, on which scientific leadership will have a strong representation. A number of national health foundations, for example, American Cancer Society, National Foundation for Infantile Paralysis, Inc., and many others, have already raised millions of dollars and are in the process of raising millions more. Psychiatry must do the same. Twenty million dollars would be a most modest amount for meeting the needs already at hand. The Committee on Psychiatric Standards and Policies, which is the body to arrange inspection and rating of all mental hospitals, an action already approved by the Council of our Association, needs seventy thousand dollars a year for the next three years. A minimum budget has been established for operating expenses of a Psychiatric Foundation, which means the raising, shall we say, of twenty million dollars, as well as the carrying out of various divisional activities, which would be approximately one hundred thousand dollars annually. A minimum of fifty thousand dollars should be expended in pub-

lic education. For an over-all plan for psychiatric education, Dr. Franklin G. Ebaugh, Chairman of the Committee on Medical Education, has estimated the need of two million dollars for the development and improvement of educational facilities. The Foundation could well spend a million dollars every year if adequate personnel could be obtained, and we know that in the near future it must be obtained if our work is to go forward on a broad scientific and humanitarian basis. When we come to the matter of research, the need for research funds is limitless. The Foundation as a Foundation, as I see it, would not itself do research work, but would be prepared to evaluate and subsidize research being done by members of our Association in clinics and in mental hospitals, both public and private, as well as giving grants to other groups and organizations, not entirely within the framework of our Association, but working on closely related disciplines in the fields of out-patient clinics, psychiatric social work, psychiatric nursing, the psychiatric implication of minority groups, and national problems of both peace and war. It may be said that the Government, under the National Mental Health Act, is prepared to cover all these fields and all this work. I don't believe any of us would want to see this total scientific advancement entirely controlled by State or Federal funds. We must always have strong, independent, privately financed organizations to initiate, to set standards, to give critical analysis, and to be above and beyond the problems of frequently changing political domination.

In conclusion, The American Psychiatric Association has a long record of leadership. It is composed of the strongest scientific leaders in our profession. It is, today, seriously handicapped by the lack of adequate funds to forward its work on a national scale,

commensurate with the needs at hand, and the skills that are available if funds are adequate. The APA alone cannot hope to have in its own treasury, adequate funds obtained through its membership, even if dues are trebled, for carrying out the work now crying for our leadership. If we are not ready to forward such plans, then some other social group or groups will, I feel sure, take over such plans with the best of intentions, but still without the training, the experience, and the organizational framework to do this highly specialized, scientific effort. We must have objectivity; we must have a strict adherence to scientific factual data. In the expenditure of the large sums of money in the field of psychiatry, we must at all times have the work projected and the grants requested studied on the basis of known needs and known skills.

The Committee for Research in Dementia Præcox, with funds allocated by the Scottish Rite Masons of the Northern Jurisdiction, has been a good example in our own field of what can be done by wisely directed small sums of money, subsidizing the effort of individuals and groups toward a research into one of our major mental health problems. With a Psychiatric Foundation, with twenty or thirty million dollars available for its work, great scientific achievements can be produced, human suffering alleviated, and the present burden of a hundred thousand new patients admitted to our mental hospitals each year be greatly reduced.

The challenge is before us. The way to meet this challenge seems to me obvious. The only question is—is our Association prepared to endorse and direct such efforts, or shall it pass into the hands of those less qualified than we are to direct and to develop this great scientific and humanitarian work in the field of psychiatry.



## THE FOUNDATION AND PUBLIC EDUCATION

PIERRE S. DU PONT, III, WILMINGTON, DEL.

The distinguished gentlemen who have preceded me outlined the broad aims and purposes of The Psychiatric Foundation. It is not my purpose as a layman in the company of medical experts to attempt to elaborate upon that which is within their province. However, as a businessman, I am concerned with what seems to me to be the most important aspect of the program, the education of the public.

Just what situation do we face today? On one hand, we have, according to available statistics, some half million patients in mental hospitals and an estimated 6 million psychoneurotics. On the other hand, to meet their needs, what do we have? Inadequate facilities and personnel. One would think that the only explanation of such a discrepancy would lie in the fact that people didn't know about the conditions. Yet the deplorable conditions in state mental hospitals and the desperate need for psychiatric facilities and personnel have been publicized and dramatized. In some parts of the country local efforts are being made to improve conditions. But isolated efforts cannot remedy what is fast becoming a national disgrace. The earnest individuals who are working valiantly in the field of psychiatry need help, and they need it on a national scale.

To get this help, there is, first and foremost, a need for educating the people to consider mental illness as a medical problem. How many laymen think of a mental patient as a *sick* person in need of medical care and treatment at the hands of medically qualified personnel? Not many. For too many decades, in the minds of too many people, mental illness, with its dramatic departures from the normal, has been unrelated to the field of medicine and its miraculous power to help the sick. Only a few years ago, medicine itself regarded psychiatrists as alienists!

The people know that medicine can help the diphtheria patient and would not deny him that help. There must be instilled in the public mind a similar understanding that

medicine can alleviate the illness of the mental patient. The people know that medical research has resulted in an efficacious treatment for diphtheria. There must be instilled in the public mind a similar attitude toward the scientific medical basis of psychiatry and its treatment of mental illness.

The American conscience would not tolerate sloughing off the care of patients with diphtheria, pneumonia, or tuberculosis onto unskilled attendants in overcrowded, ramshackle hospitals. But how many laymen think of a mental institution as a hospital? How many think of a mental institution as a medical institution housing patients with medical needs and a reasonable chance for recovery providing those needs are not neglected? When the mental institution assumes the proportions of a hospital in the public mind, the American people will not rest until their mental institutions measure up in every way to their conception of a hospital.

Therefore, it becomes our aim and our responsibility to furnish factual information which will provide the American public with a proper perspective. It is our task to enable the people to understand both the import of mental diseases and the great medical opportunities if we have the intelligence, courage, and organization to grapple at long last with mental diseases as a public health problem.

This education of the public must forsake everything foreign to scientific fact. It must dwell on early diagnosis and scientific medical treatment. It must dwell on the need for modern, up-to-date equipment, trained personnel, scientific research into the causes and treatment of mental illness, until the public state of mind demands psychiatric care that is on a par with other types of medical care in this country. Such a state of mind cannot be accomplished overnight, nor can it be accomplished by the Lilliputian, albeit well-meaning, efforts of a few scattered individuals.

I think we can learn a valuable lesson in

methodology by comparing our problem with the problems in other branches of medicine.

In order that I might accurately evaluate what education means in various medical fields, I have contacted the American Cancer Society and the National Foundation for Infantile Paralysis. I should like to read to you excerpts from a letter from the American Cancer Society in answer to the questions we asked them.

*Question.*—Do you feel that the money spent for public education fulfills its purpose in informing the public of your aims and purposes?

*Answer.*—We do feel that funds expended for education are definitely worth while. The repeated studies of the delay factor in the recognition of the disease, both by the patient and the physician, show on analysis that lack of knowledge of the early symptomatology of the disease plus fear on the part of the patient account for a considerable percentage of the total delay.

*Question.*—Do you believe that it generates interest in seeking early diagnosis and treatment? Can you quote any statistics concerning an increase in the number who seek early diagnosis and treatment?

*Answer.*—I would say that a recent study on delay made by Dr. Robbins and his associates at the Memorial Hospital in New York City on a plan similar to that made by Pack and Gallo 10 years ago shows that there is a definite improvement in the delay factor on the part of the layman.

*Question.*—What part does an educational program play in the prevention of disease? Have you any facts to indicate to what extent preventive medicine in your field is successful?

*Answer.*—The detection centers which have reported thus far demonstrate uniformly that approximately 1.5% of apparently well persons coming to the detection centers are found to harbor unsuspected cancer. As a corollary of this, nearly 30% of the patients thought to be apparently well were found to have other conditions which required attention of the medical profession.

Reports from the Infantile Paralysis Foundation show that popular response to the campaigns conducted by that Foundation provided not only \$17,000,000, but of even greater importance were the benefits resulting from an educated public acting promptly on any suspicious signs of paralysis. I quote from their letter answering our questions:

Since the National Foundation for Infantile Paralysis was established in 1938, there is mounting evidence that the public is better informed about the disease, and that communities are better prepared for epidemics.

Field study of the epidemiology of the disease

has not yet developed figures on the increase in the number who seek early diagnosis and treatment. Nevertheless, health authorities are inclined to attribute the apparent increase of infantile paralysis in this country in part to better reporting of cases, and hence better recognition of symptoms by the medical profession and the public.

Another illuminating comparison lies in the consideration of tuberculosis. Even within the past generation, tuberculous patients were victims of public prejudice. Tuberculosis was a skeleton in the family closet, something to be hidden instead of treated. But that disease was brought out into the open, and today it would be ridiculous to conceal it or to entertain prejudice against it.

In all these battles with stigmatism and shame, the emphasis of the benefits resulting from early diagnosis and treatment has played an important part. Prejudice and fear are hard things to fight. Other branches of medicine have shown that they can be overcome but it took laymen to vitalize the cancer and infantile paralysis movements. It took laymen to bring tuberculosis under control. And it will take lay leaders to present the problem of mental illness to the people in an organized, sustained way that will stimulate them to action.

The type of education that psychiatry now needs is a presentation to the public in plain, simple facts, of the principles of mental health and the function of psychiatry. How shall this be done?

Your Foundation proposes the establishment of state committees of interested lay people, who will form a volunteer field army to carry out the program of education and, eventually, fund-raising. This presents a problem of organization, and we need the cooperation of the medical profession in every state. We are especially relying on the members of The American Psychiatric Association. You can help enormously in the formation of state committees comprised of prominent lay people who will collaborate with psychiatrists and other medical men.

There are three immediate functions which such a state committee can carry out. The first is the indoctrination of the committee itself with the program of the Foundation, which is at present limited to 3 objectives: (a) public education, (b) a grant to The

American Psychiatric Association for the inspection and rating of all mental hospitals, and (c) fund-raising for the over-all program.

For the first objective, public education, \$50,000 has been appropriated for immediate use for pamphlets and other publications, for speakers who will talk to local groups, for local radio programs about psychiatry.

The grant to The American Psychiatric Association for the rating and inspection of all mental hospitals calls for \$70,000 a year for the next 3 years. After careful study and on the assumption that the only way to improve a product is to inspect it closely and bring its shortcomings to the attention of those who have authority to facilitate improvements, the Committee on Standards and Policies of The American Psychiatric Association believes that this effort should do more to improve the present deplorable conditions in our mental hospitals than any other single step that could now be taken. Our mental hospitals are the product of public funds, and every individual in this country has a right to know whether our mental hospitals meet the standards which will be set by an impartial scientific body, The American Psychiatric Association. The public and the legislatures are entitled to know what is wrong with our mental institutions and what measures may be taken to correct inadequacies. The stockholders in any corporation expect a tangible report on the entire business, including an auditing of the finances. The people in this case are the stockholders and have a right to an organized inspection and evaluation in order that they may be acquainted with the true facts.

I have discussed the program of hospital rating and inspection in detail because I want to make quite clear the relationship between the inspection and rating project and the program of public education. They are mutually dependent. The rating and inspection cannot accomplish anything unless an informed and interested public supports legislation that will correct the evils exposed. On the other hand, you can't educate people without a subject that will interest them, and surely the improvement of mental hospitals is very appealing.

The second function of the state commit-

tees will be the organization of local branches in every community throughout each state. When this has been done, there will have been established a smoothly running channel for carrying publicity and education materials from the parent foundation, through the state committees, and to the local branches where it can be distributed on the broadest possible basis.

The third function of the state and community committees will be participation in a national campaign of fund raising. We must not assume that we can immediately go out on a national campaign. We must first explore on a limited basis to find the proper techniques, just as you would use a research or laboratory method in industry.

We do know that when we are ready for a national campaign, it will cost considerable money. We must have a competent organization in the office, a nation-wide army of volunteer workers who will carry the national program to the local community, and a minimum of 2 or 3 hundred thousand dollars. When we have those things, we shall feel prepared to undertake a drive comparable to the national campaigns now conducted by infantile paralysis and cancer.

This program is a big one, but we must not be afraid to tackle it if we are going to overcome the present stigma associated with mental illnesses and if we are to render the humane service that is expected of us.

To describe the American people as phlegmatic would be to insult their initiative and vigor, which have made them leaders in a world that was ancient before their country was born. To describe them as apathetic would be to forget their spontaneous, unselfish response to human needs and suffering whenever and wherever disaster strikes. If they haven't responded to the needs of psychiatry, they haven't yet been approached in the proper way.

How many of our citizens are aware of the tremendous toll taken by mental and emotional illness so that it now constitutes our greatest health problem in America? How much have we done in a hundred years to make people understand that mental illnesses are no different from physical illnesses? How many people in this country know the number of patients who recover

from mental illnesses? I sincerely believe that if our efforts are properly directed and if our facts are told plainly, with no attempt to oversell, then we shall be happily surprised by the number of people we shall find who are interested and willing to be friends of psychiatry.

The cooperative effort of lay and medical leaders, undertaken now through the program of your Foundation, furnishes an immediate opportunity for rare service, whose implications can have lasting meaning both for the people of our country and for those of other lands.

## THE RÔLE OF PSYCHIATRY IN THE WORLD TODAY

WILLIAM C. MENNINGER, M.D., TOPEKA, KAN.

To formulate the rôle of psychiatry in the world today is a challenging task and a formidable one. In attempting to do so, one is handicapped by the limitations of his own experience—his experience in psychiatry and his experience in the world. It becomes a matter of a personal point of view as to the rôle psychiatry could or should play. Not only does such a formulation suffer through limitation of individual experience but it will be colored by one's optimism or pessimism, by one's confidence or lack of faith in psychiatry as well as in the topsy-turvy world of today.

For one who has great faith in the potential contributions of psychiatry, this assigned title tends to stimulate expansive phantasies. Perhaps we should limit our discussion to the western world, and even there the influence of or the knowledge about psychiatry is ultra-microscopic. Certainly few, if any of us, have enough information even to make assumptions about the rôle of psychiatry in much of the world. We must recognize that great geographical areas containing millions of people have never heard of psychiatry. We should be humble when we consider that among the 400,000,000 people of China, there are probably not 10 physicians with any training in our specialty. The ratio for the continent of Africa is probably even less. But in these days of internationalism, when our country has finally accepted some types of responsibility for other parts of the globe, should not we in psychiatry be alert to the international trend?

My own conception of the rôle of psychiatry even in our immediate world, this North American continent, includes an immense program. Merely to attempt to define it is disquieting because of the responsibility it implies for each one of us. My impression is that many psychiatrists may be disturbed by a consideration of our potential responsibilities in those broad areas that are less well known or unfamiliar to us. There are very few, if any, of us who are not already heavily taxed. Any additional burden is a

threat to our personal equilibrium, the more so if that burden requires change or innovations. For many of us, it is more comfortable to remain in our secluded cloisters or our ivory towers where we can continue treating some of the increasing number of patients who are coming to us. But a comparison of the present rôle with the potential rôle of psychiatry should call for reconsideration of our priorities for the investment of our very limited manpower.

Psychiatry is a medical science but of necessity it is also a social science. The psychiatrist more than the physician in any other of the medical disciplines must concern himself with the social situation of his patients. In no other specialty is there the routine necessity of considering the environmental background and the modification of that environment and the personal relationships involved. Of necessity then the psychiatrist must be concerned with our social units—the family, the community, the state. In the ordinary practice of civilian psychiatry the average specialist rarely becomes involved personally in this direction. He may make recommendations to a patient or to his family for certain changes. Occasionally, through the aid of a psychiatric social worker, he may be instrumental in making environmental changes. There have been excursions by a few of our number into the social fields of criminology, penology and industry. On the other hand, by necessity and without choice, psychiatry in the army had to function literally in the field rather than being limited merely to treatment in the hospital or office. The situation demanded our services in selection, classification and assignment, concern for morale, preventive measures, correctional institutions, and criminology, as well as in treatment.

As a background in formulating the rôle of psychiatry today it may be helpful to face frankly our position in 1941 when we were catapulted into the world crisis. Despite our lessons in World War I and the great increase in our fund of knowledge in the fol-

lowing 25 years, we were as unprepared at the beginning of World War II as we had been in 1917. Psychiatry was far from being generally accepted by those in military authority or even by many of our own medical confrères. Not only did we lack standing but we lacked plans. We suffered along with all of medicine in having no voice in high councils. We were lacking in medical statesmanship. Three years ago Alan Gregg told us kindly, but bluntly, that we lacked an organized front and that our inarticulateness was essentially self-destructive. These facts were painfully apparent to some of us during our experience in the war.

Further, we lacked tested knowledge—knowledge about selection methods, about placement, about treatment and, above all, about prevention. Many of our number did not even know the functions or the potential contributions of our co-workers, the psychiatric social worker and the clinical psychologist. Finally, psychiatry was sorely lacking in acceptance and understanding by the public. Through much of the war we fought ignorance, prejudice and misconception on every side.

We gained attention from the military command in part, and perhaps in large part, because of excessive loss of manpower from the armed forces on account of personality difficulties. Nearly 2,000,000 men were rejected for psychiatric disorders at the draft level and over 500,000 men were discharged from the army alone for personality disorders. With the navy discharges, this figure was considerably over 600,000. We were called upon to explain this loss and to take prompt measures to reduce it. Through necessity again we were obligated much further than the traditional rôle of the psychiatrist in diagnosis and treatment of the sick individual. I hope we have learned some valuable lessons. For most of us who had the privilege of experience in the service, our horizons as to the responsibility of psychiatry have been immensely broadened.

#### THE WORLD TODAY

It is difficult, if not impossible, to classify the human activity of warfare in psychiatric terms. Such pathological outpouring of ag-

gression and destructiveness well might be regarded as a psychosis. The overt outlet of killing which the shooting war provided is over but one would need the utmost optimism to regard our present world status as any stage of convalescence. Nationally and internationally, our relationships are marked with tension, mistrust, suspicion and selfishness. We cannot be unaware of the physical and emotional suffering that affects the majority of people in the world today, even though that suffering occurs thousands of miles from us. Our advances in physical science, as represented by the atom bomb and television, have progressed so much farther than our social advances that our very existence is dangerously threatened. We have learned how to eliminate space and to annihilate people but we still lag far behind in learning how to get along with each other.

During the war we had frequent occasions to contrast the psychiatrist's job in civilian life with his job in combat. In civilian life he attempted to understand and treat the abnormal reactions of persons to normal situations. In military life he attempted to understand and treat the normal reactions to an abnormal situation. One might seriously question if our world condition does not now place many of us in a continuously abnormal situation to which we are having normal reactions, even though these by all previous standards are pathological. To such a turbulent world, one might legitimately ask, what is a normal reaction?

If one turns the microscope on the world close at home we find evidence of many different types of man's maladjustment. Let us start with the family. It is apparent that major changes are taking place in its organization and structure. The tremendous number of rejections for military service and the large number of psychiatric discharges from the army made us feel that something must be radically wrong in the early experience and development of a large segment of American youth. The present status of the family has been described as at a crisis, and unless the trend is changed it has been forecast that the family as we have known it will disintegrate by the end of the century. As evidence for this are the facts that 44% of our families have no children and an addi-

tional 22% have only one child.<sup>1</sup> In 1945 there was one divorce for every two marriages in urban areas and one divorce for every three marriages in the country at large. In figures the divorces increased from approximately 250,000 in 1937 to over 500,000 in 1945.<sup>2</sup> Before the war approximately 11,000,000 women worked outside the home; 2½ million more wanted or needed work. In March 1944, there were over 16,000,000 at work away from home, 7,000,000 of whom were married.<sup>3</sup>

There would be one hundred percent agreement among psychiatrists that the healthy development of the child depends on an early home situation which provides affection, good example and security. These figures given above show that homes in increasing numbers fail to provide such conditions. These figures do not include the unknown toll exacted by the war in the temporary separation and disruption of millions of American—and world—families. The institution of the family must be the object of serious study by all who claim to be interested in mental health.

We can turn our microscope from the family to many other areas of man's maladjustment. It is variously estimated that the total cost of crime in America is between 10 and 18 billion dollars a year.<sup>4</sup> This is more than six times as much as we spend for public education. Our overflowing penitentiaries, reformatories and jails cost us over \$100,000,000 a year to operate. The Federal Bureau of Investigation reported<sup>5</sup> that the crimes in 1946 broke all records for the last decade, with more than a million and a half committed during the year. This was an increase of 120,000 over the previous year. Approximately 120,000 juveniles passed through the courts in 1945.<sup>6</sup> That the be-

havior represented in crime and delinquency is evidence of maladjustment is another point on which there would be nearly one hundred percent agreement among psychiatrists.

One is forced to assume that most of our citizens, including psychiatrists, have a total blind spot for the atrocious conditions which exist in our penitentiaries, reformatories and jails. This is in spite of the fact that many of us feel that there should be little distinction between the psychiatric hospital and the reformatory. Both should be institutions for the examination, treatment—and in some instances permanent detention—of individuals with behavior ineptitudes, distorted personalities, social maladjustment and sick minds.

In addition to delinquency and crime, there are still other evidences of mass maladjustment. Mores and standards are giving way in other directions. There is no doubt that non-marital sexual relations have greatly increased. There can be no vital statistics on this point but we do know that the cases of venereal disease reported for the first time in the continental United States indicated that the number of cases of gonorrhea doubled between 1941 and 1946, from 191,000 to 367,000.<sup>7</sup> Someone has been brave enough to estimate that alcoholism costs \$750,000,000 annually and is steadily on the increase.<sup>8</sup> We in America can hardly be proud of the fact that 4.5% of all men examined in the draft were mentally deficient. Nearly 4% of our population in 1940 had no schooling and 2½ times this number had less than 4 years of schooling.<sup>9</sup>

Quite apart from these direct evidences of maladjustment in our midst is an equally long list of our situations and attitudes and practices that are producing great stress and unhappiness for millions of Americans. Theoretically psychiatrists can limit themselves to diagnosis and treatment of patients in offices and hospitals isolated from community life. They can, and some do, ignore the social problems which bring their pa-

<sup>1</sup> Editorial, *Life Magazine*, March 24, 1947.

<sup>2</sup> Jenkinsor, B. L. *Marriage and Divorce in the United States: 1937-1945*. Vital Statistics, Special Reports V. 23, No. 9, Sept. 10, 1946.

<sup>3</sup> *A Woman's Place Is—Where? Talk It Over*, published by National Institute of Social Relations, Washington, D. C. Series G-107, 1946.

<sup>4</sup> Morris, A. *Criminology*, New York: Longmans, Green & Co., 1938, p. 20.

<sup>5</sup> Press Release, Mar. 5, 1947.

<sup>6</sup> *Juvenile Court Statistics for 1944-45*. U. S. Children's Bureau of Federal Security Agency, Washington, D. C.

<sup>7</sup> Figures obtained from U. S. Public Health Service, 1946.

<sup>8</sup> Bowman, K. M. Presidential Address. *Am. J. Psychiat.*, 103: 1-17, July 1946.

<sup>9</sup> Bureau of Census. Series P-10, No. 8, Apr. 23, 1942.

tients to them. Some do so because they are too busy with their patient load. Others do so because they feel impotent to effect any change or do not even know how to approach these larger problems. These problems are probably solvable, and with a united front psychiatry might study and offer some constructive solutions. These might not be effective; they might not even be received. Nevertheless, some of us would feel that we had at least accepted a responsibility in actively attacking these so-called social neuroses which are such real threats to our patients, our families, and ourselves.

Number one among all of the social neuroses in America today is the wide-spread prejudice and discrimination against persons because of race or color or religion. Bigoted intolerance, the thesis of "white supremacy," anti-Semitic prejudices, discriminatory practices, hostile attitudes toward Catholicism and Protestantism are all present in varying degrees in every section of America. Canadians are keenly aware of the potential dynamite in the French-Canadian problem. As psychiatrists we are not only aware of these prejudices and resentments as seen in our patients, but we have an opportunity to learn much about their dynamics and therefore their significance. As a group, have we no constructive steps to recommend in the reduction of this problem?

As psychiatrists, certainly we are aware of the effect on mental health of forced unemployment. It is variously estimated that 60 to 80% of unemployed persons manifest definite signs of mental ill health. In a majority of instances the father appears to be a failure in the eyes of his wife, his children, his friends and the community, often even to himself. Most tragic is the effect on the children. Unemployment becomes then a mental health problem which always affects two generations. The problems of unemployment have received little attention from psychiatrists, except as we have seen them in occasional non-paying patients. Our psychiatric social workers are much more familiar with the effects of mental health on the family group. Is it not another area where studied psychiatric advice should be formulated, with the hope that state and federal authorities might give us a hearing?

None of us can be unaware of the unhappiness and distress caused by the housing shortage which makes it impossible for so many of our veterans and former war workers to have a home or to find suitable accommodation in which to live. In 1946 we built approximately 500,000 homes but we needed 3,200,000.<sup>10</sup> The resulting dislocation, crowding and family friction added together compound an enormous emotional cost.

One can go on with the list almost indefinitely—strikes and their concomitant economic loss to the family and to the community; the 350,000 persons who are permanently disabled each year as a result of accidents;<sup>11</sup> our systems of political graft and private racketeering that exist in so many states and communities. Last but not least, no thoughtful person can be unaware of the anxiety and the insecurity caused by our tenuous international relations.

One might inquire, what have all of these to do with psychiatry? As a group of scientific experts who are interested in and concerned with the way men think and feel and behave, it is only logical to assume that these social ills might be among our very special concerns.

#### PSYCHIATRY'S RÔLE AS IT IS TODAY

Surrounded as we are with these many evidences of man's maladjustment and unhappiness in the world today, we ought to examine the rôle of psychiatry as it exists at the moment. What has it done? What is it doing? What is its status in relation to the world? Again, of necessity, we must confine our survey to the United States.

Within The American Psychiatric Association, we have approximately 4000 members from the United States and Canada. There are, perhaps, an additional thousand physicians now in training in this field. A little over 60% of this group are devoting their full efforts to the treatment of some 625,000 patients in state and federal institutions. These physicians are responsible for

<sup>10</sup> Wanted—A Home. Talk It Over, published by National Institute of Social Relations, Washington, D. C. Series G-103, 1946.

<sup>11</sup> Rusk, H. A. The Forgotten Casualty: The Disabled Civilian. New York Times Magazine May 12, 1946.



the patients in 38% of all hospital beds in the United States<sup>12</sup> at a direct cost of about \$300,000,000 a year. However, there have been various estimates<sup>13</sup> that we need between 10,000 and 14,000 trained psychiatrists at the present moment. Dr. Paul Hawley<sup>14</sup> indicated that he could use all of the first class psychiatrists now available in the United States to meet current needs within the Veterans Administration. Dr. Daniel Blain has indicated that he has about 600 now on duty but needs three times that many and within 12 years will need seven times that many. All of these will be required for the direct treatment of patients. Very roughly, we have about one-tenth of our current personnel needs in clinical psychology, psychiatric social work and less than this in psychiatric nursing.

Many of us believe that most of the minor psychiatric problems could and should be cared for by the general practitioner and specialists in other fields of medicine. However, in the army I was repeatedly impressed by the fact that only a small percentage of medical officers had enough psychiatric knowledge to carry out any psychiatric treatment. Despite the astounding figures of incidence of emotional illnesses, our medical schools are still allotting an average of 4% of their total curriculum hours to the teaching of psychiatry. In no medical school is it classed along with anatomy and physiology and pathology as a basic subject.

Psychiatry has made halting steps into the area of public health. In 5 of our states we have a psychiatrist in the department of health. In 7 others we have a mental hygiene program under some separate unit or division within the state. In an additional 5, psychiatry functions under the Department of Public Welfare. It must be acknowledged, however, that in none of these has psychiatry made more than a start. In very few of them are any efforts directed towards the prevention of mental ill health. Nearly two-thirds

of our states have no psychiatric program other than that of the state hospitals.

We must frankly face our group responsibility for the practice of psychiatry in the state hospitals. From my point of view, the recent exposure of situations in certain of these has been very worthwhile. It would be my hope that such exposures be aggressively continued until such time as the public conscience is awakened. But we in psychiatry can hardly remain indifferent or passive for we are not blameless. We are faced with the paradox that in many states there are excellent psychiatric departments in a university. Within a few miles is a state hospital which can provide only one physician to 300 or 400 patients, perhaps has no graduate nurses and most likely no trained psychiatric social workers or clinical psychologists. Until recently, these institutions have personified psychiatry in America. They still are the embodiment of our specialty in the eyes of the public. How can the public respect us and have confidence in us when we are silent in the face of these conditions?

Going further into the inspection of our own realm, we must clarify our concepts of clinical psychiatric entities so that we may have a better understanding of our diagnostic nomenclature. We should have no illusions that our own confusion is not sensed and capitalized upon by our medical confrères. It also adds to their misunderstanding about our field. Our inability to agree on various concepts is not nearly as important as the fact that we do not have sufficient knowledge on which to come to an agreement.

Psychiatry has made some excursions into some of our social problems though, unfortunately, they are very limited. Although it has been 30 years since a psychiatrist first interested himself in the mental hygiene of industry, at present we still have less than a dozen full time workers in this field. Although Healy, White and Adler pioneered in fields of delinquency and criminology nearly 40 years ago, we have only 10 adult criminal courts with psychiatric service and probably considerably less than 100 psychiatrists practicing in criminal institutions. We have made real progress in the provision of psychiatric assistance to juvenile courts but

<sup>12</sup> Based on figures given in the Hospital number of the J.A.M.A. 130: 1073, Apr. 20, 1945.

<sup>13</sup> Felix, R. H. Annual Meeting of Mass. Soc. for Mental Hygiene, Jan. 24, 1946; Rennie, T. A. C.: *Ment. Hygiene* 29: 644-690, Oct. 1945.

<sup>14</sup> Hawley, P. R. *Neuropsychiatric Problems of the Veterans Administration*. *Milit. Surg.* 99: 759-762, Dec. 1946.

unfortunately in the great majority of these, this service is limited to providing a diagnosis and no treatment.

Psychiatry has made a little greater inroad into the field of academic education. This has not been so much because psychiatrists have taken the initiative in this direction as because the intelligent educators have sought the help of mental hygiene. It is encouraging to see the increasing number of colleges and high schools in which mental hygiene consultation service is available. There is an increasing number of universities and colleges which are providing courses in mental hygiene for their students. However, the number of institutions with such a service is still a small minority of the total.

#### THE RÔLE OF PSYCHIATRY IN THE FUTURE

When we look at the status of psychiatry today we find that it is acutely lacking in personnel. It is lacking in tested knowledge. It has given minimal attention or study to social problems or their possible solutions. By force of circumstances it has been so busy attempting to treat patients, in many instances merely caring for them, that there has been little time for consideration of preventive measures. The same factors have limited its permeation into the general practice of medicine. Unfortunately, many of us within the ranks of psychiatry have worn blinders which were forced upon us by our daily load. Our vision has been restricted and unless forced to do so, we have taken little or no time to consider our greater responsibility for the troubles of the world in which we live.

As I have said, anyone who presumes to formulate the rôle of psychiatry in the world today can do so only in terms of the limitation of his vision. Also I have indicated my opinion that organized psychiatry has the responsibility for outlining its goals. This could happen only if many of us are willing to crystallize our own thoughts in this direction. For whatever value they may have I wish to indicate my opinions as to the rôle that psychiatry should play in the world.

Our greatest immediate need is for trained personnel—psychiatrists, clinical psychologists, psychiatric social workers and psy-

chiatric nurses. There is no greater nor more important contribution to be made by any individual in our membership than to be engaged in the training of personnel. We must recognize that this job of training comes near to being a sacred trust. If we expect to have psychiatrists who are competent to handle the increasingly complicated problems confronting all of us, they need an intensive, integrated, well planned training. From personal experience I know that there are numerous so-called residencies, many of which are on the "approved list," that provide little training other than what the man can dig out for himself. Good training must be on a broad base. In addition to the knowledge about the structure and function of the personality, this training ought to provide the psychiatrist with a knowledge of his co-workers in social work, psychology, nursing, occupational therapy, and how to use their skills. It ought to provide some information relative to the relations of psychiatry to our world—in religion, politics, literature, art. Certainly it should introduce the student to the social issues and problems of the day. The need for the training of personnel has number one priority in psychiatry at the moment.

Next to personnel, an extensive broadening of our body of tested knowledge is most needed in our field. We know very little about the "normal" personality or why it is or is not normal. We cannot adequately define a psychoneurosis. We have minimal data on why one set of organs is picked out in preference to another in the development of the neurotic reaction. We have only the vaguest knowledge of the cause of schizophrenia. If we are to apply ourselves to social problems, every avenue leading to any one of these should be classified as research. Research, like teaching, is a specialized job requiring unusual abilities and long training. At the present moment we have a piteously small number of full-time research workers in the whole field of psychiatry.

Psychiatrists will always have a major responsibility for the treatment of mental illness. There are many areas within this field which need to be greatly perfected, by the development of shorter and more effective methods of treatment. We need to think

through with the clinical psychologists and psychiatric social workers their contribution to psychotherapy and then provide the training for them. We need to develop far more extensively than we have to date our milieu treatment within the hospital. For the most part we still lack specificity in our prescriptions for occupation, education, recreation, industry and all of their variations of reading, art, music, horticulture and many other activities. Most of us have only meager knowledge about remedial reading, speech training, and the applications of psychiatric principles in physical rehabilitation.

In this area of treatment, we in psychiatry share with all medicine, a current and perhaps recurrent crisis in providing the best medical care of veterans. Under Generals Bradley and Hawley, a remarkable system of treatment with highest standards has been organized in the Veterans Administration. Along with current congressional economy measures, this medical service has suffered, and faces potential regression to a pre-war status. Reductions in appropriations and personnel in the face of an increasing patient load inevitably will lower morale, impair service and provoke resignations of medical and allied professional personnel. It is imperative that we in psychiatry, along with all real friends of disabled veterans, point out to the public and Congress immediately the certain results of such cuts in appropriations. If Congress wishes to provide only mediocre medical care, it is its decision. We in medicine, however, must make it clear that to reduce finances, personnel, consultants, teaching programs, and travel for supervisors will drastically reduce the gains that have been made for the sick veteran.

As a step toward meeting the great treatment need, we must place a high priority on the integration of psychiatry with the rest of medicine, particularly in the curriculum of the medical school. It is entirely our responsibility to recommend and direct how psychiatry itself should be taught. It is also our responsibility that psychiatric principles should permeate the teaching of all medicine, and that a helpful body of usable knowledge should be made available to all physicians.

Our Association needs to be organized so that it permits and stimulates every member

to make a contribution towards the solution of the problems facing psychiatry today. We can hardly expect progress when certain of our committees meet only once, if at all, during the course of a year. Even then there may be no obligation or finances to initiate studies or surveys or research into the problems for which they are nominally responsible.

This prompts me to mention briefly the organization of The Group for the Advancement of Psychiatry. As was evidenced at the meeting a year ago, some of us felt dissatisfied with the progress of psychiatry, were impatient with our own limitations, and with our lack of opportunity to sit down and think and work together on problems that seemed vital to all of us. At that time some of us verbalized this mutual feeling but felt that we were not justified in merely criticizing or being impatient. We concluded that we should find ways and means to promote some group thinking and surveys and study. The result was an informal, very loosely organized conference group which, with the financial aid of the Commonwealth Fund, held a three day conference last fall and will shortly hold a second one. We organized in small working committees, every member of which was required to be a worker. We agreed to sacrifice in time and money to a considerable extent in order to study such problems as the needs of state hospitals, medical education, contacts with lay groups, preventive psychiatry, psychiatric social work, treatment and other subjects. At present there are 15 different committees each with specific responsibility. We limited the participants to members of this Association. In no sense was our action meant as a revolution or a secession or a competition with this Association. It was originally and still is our hope that the aims and methods and work of the Group might become an integral part of this Association. It seemed to me a year ago, and equally so today, that every member of our American Psychiatric Association capable of doing so should be contributing to the development and leadership of psychiatry beyond his daily work.

One of the essential rôles of psychiatry must lie in the field of prevention of mental

ill health. If we continue to confine ourselves to treatment only, it is inconceivable that we could ever meet the obligation. Not until we have learned effectively to prevent mental illness can we begin to discharge our responsibility. Psychiatry in the war started on the basis that treatment was the sole province and responsibility of the psychiatrist. We learned by experience, however, that our greatest contribution should have been in the field of prevention. This involved putting psychiatrists into the field to live with the soldiers, thus learning their problems, attempting to modify their stresses and develop their supports. Only there could they advise leaders effectively about immediate factors that affected mental health. It would seem that psychiatry's great opportunity is to work similarly in the fields of academic education, public health, recreation, delinquency and industry.

Our lessons in preventive psychiatry from the army emphasized three major factors in maintaining mental health. The first, and most important, was that quality of leadership was a cause of or prevented mental ill health. We learned that the development of positive rational attitudes towards the job to be done, *i.e.*, conscious motivation—could be a great aid to the doing of that job. Unquestionably, "good" motivation was an important factor in maintaining mental health, and "poor" motivation was followed by an increase in the number of psychiatric casualties. The development of an identification with a group which permitted a sense of pride, and provided comparative security, satisfaction and unity of purpose was extremely important to mental health. It was apparent that these elementary lessons which applied to the maintenance of an individual's mental health in the army, could apply in the family, the group, the community and the nation. One of the chief aims of preventive psychiatry should be the continued attempt to educate parents and all leaders as to the importance of developing mature persons, in line with the challenge that Brock Chisholm gave us in his William Alanson White lectures.

Preventive psychiatry must concern itself with the cause and alleviation of mental illness—neuroses, psychoses, the character

defects. It must find ways to reduce the many symptoms of social ills enumerated earlier—delinquency, crime, divorce, illiteracy, mental deficiency. It should certainly concern itself with forced unemployment prejudices, discrimination, strikes, accidents.

Psychiatry should place a high priority in its efforts to provide the "average" person with psychiatric information he can apply to his own problems. As I have tried to indicate previously, the great number of psychiatric casualties during the war called attention to the need for public education in the field of mental hygiene. The public wants this education. If adequately given it could be very helpful. Very possibly it may increase the number of patients who seek help from a psychiatrist just as a campaign about cancer or tuberculosis increases the number of patients who go to doctors about these problems. The aim of such public education, however, certainly should be to provide the average man with a better understanding of his own mental health, how to fortify it, how to improve it.

We in psychiatry in America must become more international in our interests and work with psychiatrists abroad. Some years ago an international mental hygiene organization was formed and plans are on foot to revive it. The American Psychoanalytic Association has always been a part of the International Psychoanalytic Association. With the increasing necessity for a world point of view today, we should have a vital part in any international psychiatric effort, through the United Nations Health Committee as well as an international psychiatric organization.

Through the foresight of Dr. Frank Fremont-Smith of the Josiah Macy, Jr. Foundation, we have as our guest at this meeting Dr. J. R. Rees of London who is here to solicit our interest in an international congress of psychiatry in England next year. It is my impression that our best contribution to the United Nations Health Organization might be made through an international psychiatric organization.

To accomplish all of these aims may appear an impossible assignment. They can be approached only if every individual member of the organization is willing to contribute

It is essential that the organization provide ways for him to make his contribution. In addition, however, such a program for psychiatry calls for immense support through public understanding and financial backing.

The most immediate and concrete encouragement for the further development of psychiatry has come through the National Mental Health Act, sponsored by the United States Public Health Service. From this source a considerable sum of money will be available immediately, with a promise of a much larger amount in the coming years.

Over the years, the National Committee for Mental Hygiene has given leadership in providing a better understanding of mental health in the national scene. The recently formed National Mental Health Foundation is championing the needs of our state hospitals, and particularly the improvement of the status of the ward attendant. We in the Menninger Foundation are devoting ourselves to an all out effort in training and research. All of us in psychiatry are in great debt to the several general Foundations which have done so much for us, and express the hope for their continued support.

This section of the program of this convention is under the auspices of the most recently organized group for the support of psychiatry—The Psychiatric Foundation. It has long been recognized that to give leadership in our field, our own Association needed far more financial support than could be obtained from membership dues. With this need as a stimulus, a small group of our members, through the personal work of Austin Davies, launched the Psychiatric Foundation. It is my fervent hope that its development will be supported and hastened in order to permit it to launch whatever program is agreed upon by The American Psychiatric Association.

This we must make clear to the public and to the profession—all the efforts of the various Foundations are cooperative attacks on the immense problems ahead; none of these varied enterprises is in competition with the others.

## CONCLUSIONS

We all look with pride on the phenomenal victories of preventive medicine. No longer is the world cursed with smallpox or cholera or yellow fever or typhoid. World epidemics of these diseases are no more. Is there any hope that medicine, through its Cinderella, psychiatry, can step forward to offer its therapeutic effort to a world so full of unhappiness and maladjustment and varying degrees of social disintegration? Can our intensive study of the individual lead us to a better understanding of his environment, of the social forces that affect his life? And can this understanding, if made available to the right leaders be helpful in alleviating these social ills? Perhaps some psychiatrists might answer this in the negative. My own strong conviction is that psychiatry *can* help.

Some of my confrères who will answer in the negative may do so because of a misconception that this program may be an attempt to over-sell psychiatry. My contention has always been that one cannot over-sell the value of a tested product except in terms of ability to deliver. In outlining this program I have had no intention of selling psychiatry except to ourselves. I feel strongly that we are not now in a position even to deliver much of the available information that we might assemble. It has been my intention to direct our thought to a wider horizon and to urge acceptance of our responsibility for contributing what understanding and therapy we can for the problems of unhappiness and maladjustment that exist in the world today. To do this we must greatly increase our trained personnel. We must extend our frontiers of knowledge. We need to crystallize our goals. Our organization should require that groups of us survey specific problems, collect data about these, apply our knowledge to them, and produce a program of action. We need to develop more medical statesmanship, so that our findings and recommendations can be presented to leaders in high councils in many fields of activity. Can we and should we undertake this? We can no longer evade a decision on the matter.

## THE ADVANTAGES OF NITROUS OXIDE INHALATION IN PSYCHIATRIC TREATMENT<sup>1</sup>

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During the last decade psychiatrists have made ever-increasing use of disinhibiting agents in the treatment of various mental disturbances. The intravenous administration of barbiturates, notably sodium amytal and sodium pentothal, has become a standard procedure in clinical psychiatry. Narcoanalysis tends to produce three principal effects: (1) lowering of inhibition which results in increased expression of suppressed and repressed ideational content; (2) externalization of repressed affects ("abreaction"); (3) establishment of better rapport with the psychiatrist. While each of these results may be obtained without pharmacological treatment, through psychotherapy alone, the narcosis allows them to develop in a considerably shorter time. However, this advantage is gained at the expense of a physiological depression of the central nervous system that lowers the efficiency of the higher mental processes. Since it is sometimes advisable to prevent the patient from falling asleep following narcoanalysis, stimulants must occasionally be given, after the barbiturate. Narcoanalysis usually interferes with the patient's ordinary activities for a period of several hours.

Searching for a method which would offer the advantages of narcoanalysis to produce disinhibition and increased accessibility without depressing the central nervous system, we have become interested in the effects and aftereffects of nitrous oxide anaesthesia.

Zador(1) in 1928 studied the effect of nitrous oxide in psychotic patients and normal individuals and concluded that it might possibly have therapeutic value in certain cases. Alexander and Himwich(2) in 1939 treated schizophrenics with nitrous oxide but later changed the treatment to inhalation of pure nitrogen. Fogel and Gray(3) in 1940 published a report of 24 cases of schizophrenia treated with nitrous oxide with en-

couraging results. They found it to be of value in early cases, while chronic cases were unchanged. Rogerson(4) in 1944 described a method of using nitrous oxide inhalations as an aid in psychotherapy. While Fogel and Gray(3) carried the hypoxia-anaesthesia to considerable depth, Rogerson(4) left the control of the inhalation to the patient who would not lose consciousness but only reach a state of mild intoxication.

Guided by the hypothesis first formulated by Himwich(2) that the therapeutic principle of insulin and convulsive shock treatment is to be found in cerebral hypoxemia, Alexander and Himwich(2), Fraser and Reitman(5), Green and Adriani(6), and Levine and Schilder(7) investigated the therapeutic value of severe hypoxemia produced by inhalation of pure nitrogen. Himwich(2) reported encouraging results with his treatment, but this could not be confirmed by other authors. Gurevitch *et al.*(8) reported on the treatment of depressions with inhalation of nitrogen and a low percentage of oxygen (9%). Their results were favorable and in their opinion warranted further experiments with the method in depressed states. Meduna(9) has recently published a report on the inhalation of carbondioxide-oxygen mixtures in the treatment of psychoneurotics. His method aims at direct stimulation of the lower structures of the brain. This effect was first demonstrated by Loevenhart *et al.*(10) in catatonic patients.

It is interesting that the authors using nitrous oxide, nitrogen, or carbondioxide-oxygen have not made any systematic attempt to treat manic patients. We have found that states of acute manic or catatonic excitement sometimes show a prompt therapeutic response to nitrous oxide hypoxia.

It should, however, be emphasized at this point that we were not seeking for a "cure" of any particular mental disease but were concerned mainly with the symptomatic mental changes, particularly in the emotional

<sup>1</sup> The writers are indebted to Doctor C. A. Porteous, Medical Superintendent of the Verdun Protestant Hospital, for permission to publish this report.

sphere, that are transitory and follow the termination of nitrous oxide hypoxia.

#### MATERIAL

We have treated 44 patients: of these, 10 were classified as manic-depressive, manic; 13 manic-depressive, depressed; 1 acute catatonic excitement; 1 acute alcoholism with drug addiction; 1 delirium tremens; 1 mental deficiency with psychosis; 1 anxiety-hysteria; 1 anxiety state; 15 chronic schizophrenics. Age range was from 19 to 77 years. All our patients with the exception of 2 deteriorated schizophrenics showed overactivity ranging from restlessness to extreme excitement verging on delirium. In most of our patients there were sleep disturbances, ranging from nightmares in some cases to a total absence of sleep due to excitement in others. The writers also underwent nitrous oxide hypoxia for experimental purposes.

#### METHOD

We use a standard Connell inhalator for surgical anaesthesia which includes a rubber rebreathing bag, carbondioxide filter which can be turned on and off, and a well-fitting rubber mask. The patient should not have eaten for at least an hour and a half, and it is preferable not to use any premedication since this might mask the physiological signs of hypoxia. The treatment is given in a quiet room. We have made it a practice to have one other person present besides the therapist; in the case of women patients a nurse is always present. We have had little difficulty in persuading the patients to take the treatment in most cases. With the patient lying down the rebreathing bag is filled with pure nitrous oxide. The rubber mask is then applied firmly to the face so that there are no leaks. Throughout the treatment the nitrous oxide flow is regulated so that there is a slight positive pressure (usually 6 to 8 litres per minute). In order to increase the rate and depth of respirations, the filter is turned off for the first minute of treatment so that there is CO<sub>2</sub> rebreathing. A further aid in increasing the depth of respiration in uncooperative patients is the application of slight pressure on the bag on each inspiration. It is sometimes found necessary to re-

strain the arms manually during the brief "excitement" stage. Pure nitrous oxide is administered to the point when respiration becomes rapid, regular, and automatic, and/or when the eyes are turned downward and inward. This is the first sign of increased muscular tone and would be followed by twitching of the face and spasticity and clonic contractions in the upper extremities if the hypoxia were allowed to continue. The moment this point is reached the bag is emptied of nitrous oxide, filled with pure oxygen and the latter is administered under pressure, care being taken that the mask is held loosely over the face. The patient is usually cyanotic at this stage, but the presence or absence of cyanosis is no reliable gauge of the hypoxemia produced. Four to five respirations of oxygen usually suffice to bring about the return of color. There follows a short period of apnea lasting 10 to 30 seconds. The mask is then removed and the patient allowed to waken spontaneously with no stimulation on the part of the therapist.

Times vary for different persons but are remarkably constant for each individual. As a rule consciousness is lost after a minute of nitrous oxide inhalation and the whole treatment lasts, in most cases, from 2 to 3 minutes. We have found the rare resistant patient who will require more time, but we have made it a rule not to exceed 4 minutes of nitrous oxide administration in any case. In addition to the sign of rapid, regular, and automatic or stertorous breathing which indicates oxygen want, and a turning inward and downward of the eyeballs, there are two other signs which we consider indications for immediate interruption of the hypoxia: dilatation of the pupils, and the appearance of clonic movements in the upper extremities. We have been careful to avoid the stage of torsion and extensor spasm. Carrying each patient to the same depth of hypoxemia as indicated by the above-described signs enables one to standardize the procedure.

#### PHYSIOLOGICAL OBSERVATIONS

The typical sequence of the effects of nitrous oxide on the respiratory, circulatory, and central nervous systems can be found in handbooks on anaesthesia, in monographs on nitrous oxide anaesthesia(11), and in the

paper by Fogel and Gray(3). We have found that with the degree of anaesthesia-hypoxemia produced in our cases, the pulse rate seldom rises above 110 and the systolic blood pressure usually increases only 10 to 20 mm. Nitrous oxide does not irritate the mucous membranes and does not produce coughing or gagging. We have not seen any case of laryngospasm in our series, and we have not found it necessary to resort to artificial respiration. The deep reflexes are hyperactive when the anaesthesia is terminated. Abdominal reflexes remain present as a rule. Pathological reflexes cannot be elicited except for occasional ankle clonus.

Immediately after awakening the pulse rate drops rapidly to somewhat below the pre-anaesthetic rate. The blood pressure falls to normal within 5 minutes. Four cases in our series reported slight nausea following the treatment, and occasionally patients complained of dizziness for a short time. The gait is unsteady immediately after the anaesthesia, but full control of the equilibrium is usually regained within 5 minutes. Urinary incontinence was present in 2 cases.

We have treated 4 cases with cardiovascular disease repeatedly without any untoward results, although these patients had been considered unfit for electric shock treatments.

#### PSYCHOLOGICAL OBSERVATIONS

Consciousness is reestablished rapidly after the termination of  $N_2O$ -inhalation. Usually within a minute, often in less time, the patient is able to answer questions and to engage in conversation. We have never observed aphasic disturbances. There is no confusion and the patient can call the physician by name as soon as he awakens.

In contrast to the patients treated with pure nitrogen inhalations who, according to Levine and Schilder(7), have amnesia for their unconsciousness, the individual awakening from nitrous oxide anaesthesia is aware of having lost consciousness. The patient may declare "I must have been asleep," or "I have been far away," or he may ask spontaneously how long he has been unconscious. Most patients have vivid dreams but they are not always able to recall them. If the dreams are remembered,

they are remarkable for their reality-like coherence, and they offer valuable material for the evaluation of the patient's affective state.

Another difference between the effects of nitrous oxide and nitrogen inhalation consists in the important fact that nitrous oxide anaesthesia in most cases produces a change in the patient's emotional state and in his rapport with the physician. Levine and Schilder(7) found that nitrogen inhalations leave the patient unchanged in both aspects. Fogel and Gray(3) mention euphoria of brief duration following nitrous oxide anaesthesia. The majority of our cases reported a feeling of increased well-being immediately following the treatment and often lasting several hours.

This feeling of increased well-being is to be distinguished from the euphoria which develops during the induction period, particularly if nitrous oxide-oxygen mixtures are used. At that stage the patient is moderately hypoxemic, disinhibited and elated, in the sense of being "slap-happy," while his reasoning is impaired. The name "laughing gas" is derived from the observation of patients in that condition.

After awakening from the anaesthesia many patients state that their head feels clearer or that a pressure is lifted from it. Irritating aches and pains, such as rheumatic complaints and headache are usually absent for some time after the treatment. While most patients state that they feel more cheerful and vigorous, manic patients often report that they feel more composed. With few exceptions, the patients' rapport with the physician is improved following the treatment. They are more cooperative and express greater confidence.

A remarkable feature is the eagerness and spontaneity which many patients show in discussing their own condition following the treatment. It is sometimes possible for the physician to sit quietly for 10 or 15 minutes without saying a word while the patient talks continuously, and with considerable intensity. Many patients express openly their prevailing affect and bring out traumatic material sometimes reenacting a traumatic event while awakening, and interpreting it spontaneously as soon as they are fully



conscious. The patient's insight into his own condition is usually enhanced, sometimes for hours after the treatment.

During the induction period as well as during the short time between the termination of nitrous oxide administration and full return of consciousness, we have seen the expression of marked anxiety, depression, aggressiveness, or eroticism, according to the underlying mental condition. One patient presented the picture of a hysterical twilight state with automatic movements, muttering, and uncontrolled emotional behavior after each treatment. This state lasted from 2 to 3 minutes.<sup>2</sup>

### RESULTS

We have given a total of 320 treatments. The total number of treatments per patient ranges from 1 to 28; frequency of treatment from 1 a week to 4 a day, the latter depending on the response to treatment. We have refrained from tabulating our results because the majority of patients was treated symptomatically and only in a few cases was a systematic attempt made to bring about a remission.

In all our cases without exception a sedative effect was noted. Immediately following each treatment patients were more composed and showed a definite diminution in the intensity of their restlessness or excitement. All showed improved sleep the following night, and it seemed to matter little at what time during the day the treatment was administered. Some cases also received "sedative" insulin, but most patients could be controlled without the use of any additional sedative. The sedation that follows the period of stimulation and facilitation of mental processes is not associated with drowsiness or confusion as is often the case with barbiturates. Patients who required heavy sedation at night would often sleep through the night without any medication if they had

been treated during the day. It should be noted that the patients will be inclined to be active immediately after treatment and experience the relaxation and sedation about an hour later. Sample cases:

1. V. M., male, age 54, manic-depressive, manic. Has been in hospital since July 14, 1941, with recurrent manic episodes, occurring every 2 to 4 months and lasting about 2 weeks each. Has received a total of 108 electric shock treatments since admission with only symptomatic relief. N<sub>2</sub>O treatments served to keep this patient under control during exacerbations.

2. H. E., male, age 62, involutional melancholia with presenile changes. Admitted March 10, 1946. Repeated courses of electric shock treatments, each time followed by a recurrence of symptoms within a few weeks. Now shows depression and retardation, sleeps 9 to 10 hours a night but complains of nightmares. Feels hopeless and frightened because of the dreams that threaten him with insanity. Every conceivable combination of sedatives, including insulin at bedtime, has been tried but did not succeed in eliminating the terrifying dreams. Treatments given on 4 occasions at bedtime have produced a feeling of well-being with inability to sleep for 2 hours following the treatment, followed by 8 hours of "natural" sleep with pleasant dreams.

We have noted complete remission of acute excitement in some of our cases. Examples:

3. V. J., female, age 35, manic-depressive, mixed state. Admitted January 26, 1947. Two previous attacks in 1944. Overactive, overtalkative, violent but showing some insight. Improvement was noted from the first treatment on January 28. On January 31 (fourth treatment) she had an orgasm during the induction phase of treatment. She had 2 further treatments and remained well until March 8 when she was sent home on trial. She has since been readmitted with an exacerbation of the original condition.

4. H. A., female, age 30, manic-depressive, manic. Admitted November 27, 1946. Previously committed for similar symptoms in 1942. Overactive, loquacious, expansive, and violent. Electric shock and modified insulin treatments produced improvement that was maintained for a few days only. Thirteen N<sub>2</sub>O treatments February 28 to March 11 have brought about a remission. She at present enjoys ground privileges.

5. P. F., male, age 19, catatonic schizophrenic. Admitted February 7, 1947. Hallucinated, expressing delusions of persecution and self-accusation. On February 10 he became acutely agitated, hallucinated, shouting, and violent. Maximum sedation served only to prevent complete exhaustion. The temperature rose to 102 because of the excite-

<sup>2</sup> We are at present engaged in the study of psycho-physiological phenomena existing during the hours following nitrous oxide anaesthesia. These findings will be published separately. They indicate interesting changes in sensory, motor, and memory functions occurring in phases which correspond to stimulation and depression of the central nervous system.

ment. On February 11, at 10:30 a. m. he was given a nitrous oxide treatment. He was quiet for 3 hours, then became overactive and shouting. At 2:30 p. m. a second treatment produced rest for 3 hours. He slept 6 hours that night. The next morning his temperature was normal. On February 12, 13, 14, and 15 he was given 3, 2, 1 and 3 treatments respectively. He became quiet and cooperative although still hallucinated. He is now receiving coma insulin therapy.

Of interest is the response of psychoneurotic symptoms to this treatment:

6. F. R., male, age 35. Admitted November 10, 1946. Complaining of "gas on his stomach," tightness in the throat, and insomnia. He was despondent and anxious. He had received intensive psychotherapy at another hospital prior to admission. Psychotherapy was attempted at this hospital with no improvement, resistance being too great. Sedatives, benzedrine, and insulin were tried without result. On his treatment on February 1 with  $N_2O$  he had a hysterical seizure on awakening, asked for a drink of water, and then spontaneously gave an account of a convulsion that his mother had a short while before her death due to a brain tumor. On February 4, a hysterical seizure occurred during the induction stage of the treatment. On awakening he was less circumstantial in speech and less dramatic in his conduct. On February 6 he showed marked excitement at the termination of treatment, but no seizure. He talked spontaneously about his "egocentricity." He has received 5 weekly treatments followed by psychotherapeutic interviews and has shown marked improvement and some insight. He is expected to return to work within a short time.

7. D. N., male, age 19. Admitted May 6, 1946, with a history of 2 admissions to mental hospitals since 1944 for catatonic schizophrenia. Coma insulin therapy produced marked improvement with a residue of hysterical symptoms, brought on by visits from relatives and disturbances on the ward. These hysterical reactions produced a relapse twice. Psychotherapy was attempted to no avail. With 11 daily nitrous oxide treatments patient progressively and spontaneously developed insight into his hysterical symptomatology. He is at present free of symptoms, quiet, cooperative, gregarious, is unaffected by ward disturbances or visits from relatives. He is enjoying ground privileges and is expected to leave the hospital within the next month.

#### DISCUSSION

Other workers have employed inhalation of a variety of gases in the treatment of psychiatric conditions. Our choice of nitrous oxide as the pharmacological agent was prompted by three reasons: Firstly, nitrous oxide offers the most pleasant method of induction as far as the patient is

concerned. There is no feeling of suffocation and no physical discomfort, which sometimes accompanies the hyperventilation produced by inhalation of carbondioxide. Secondly, the psychological aftereffects of nitrous oxide hypoxia are different from, and preferable to, those produced by inhalation of pure nitrogen. Thirdly, the great body of clinical experience with nitrous oxide, which has been used in hundreds of thousands of cases, is the best assurance for the safety of its use.<sup>8</sup> Nitrous oxide does not produce the pronounced effects on the cardiovascular system that accompany the inhalation of carbondioxide-oxygen mixtures.

Comparing our technique of nitrous oxide administration with that of Rogerson(4), or Fogel and Gray(3), we felt that it would be valuable to retain the feature of rapid loss of consciousness, while it is desirable to avoid the risks of deep anaesthesia-hypoxia. If the inhalation of nitrous oxide is terminated before the stage of clonic contractions and extensor spasms is established, the brain is only subjected to a degree of hypoxemia that it can safely carry, especially if the anaesthesia is terminated within 2 or 3 minutes. The fact that several of our patients have been given 4 treatments daily for several days in succession without showing any signs of confusion or neurological involvement tends to demonstrate the complete reversibility of the changes in cerebral metabolism and function that are caused by the short administration of nitrous oxide.

Opinions are still divided as to the mechanism of action of nitrous oxide on the brain. While some authors claim that the gas is inert and produces its effects merely through the exclusion of oxygen and the resulting hypoxemia(11), others insist that nitrous oxide has a specific anaesthetic effect. The first theory is based on the observa-

<sup>8</sup> There have been many reports on neurological and psychiatric complications, as well as fatalities, following nitrous oxide anaesthesia. Fletcher(12) has recently reviewed these untoward sequelae. However, such complications will arise only if the hypoxemia is carried to a dangerous depth and maintained for long periods, that is, half an hour or even longer, as is often the case with surgical operations. It must also be remembered that the surgical patient is a poorer risk and that nitrous oxide-oxygen anaesthesia is often combined with ether, thus adding a toxic factor to the hypoxia.

tion that except for the brain no other organ or system in the body is affected by nitrous oxide. Whatever changes in circulation and respiration are observed can be explained as being secondary to hypoxemia. It is pointed out that nitrous oxide is about 100 times more soluble in body fluids than oxygen and about 15 times more soluble than nitrogen (11). Consequently it rapidly "crowds out" the oxygen in the plasma. At the same time it is extremely rapidly eliminated from the organism because it does not combine with any body fluids nor attach itself to any cell components as is the case with the group of lipid-soluble anæsthetics. On the other hand, the difference of the psychological after-effects of nitrous oxide hypoxia as compared with those observed following pure nitrogen hypoxia tends to suggest a specific pharmacological action of nitrous oxide on centers affecting the emotional sphere. It is not possible at this stage to decide whether this action is due to primary stimulation of cortical or subcortical centers. Empirically one observes facilitation of cortical functions following a short nitrous oxide anæsthesia.

It is this facilitation of mental functions that makes the patient more accessible for psychotherapy and enables him to develop insight. The insight he achieves in this manner has been gained through reintegration of his conscious mental processes rather than through disinhibition or "dissolution" of cerebral processes in the sense of Hughlings Jackson. Narcoanalysis is based on the latter mechanism, *i. e.*, temporary depression of controlling higher psychic functions.

Other stimulants of the central nervous system, such as caffeine or benzedrine, frequently produce restlessness and insomnia, while nitrous oxide anæsthesia has the peculiar effect of bringing about sedation approximately 1 hour after the period of stimulation. The sleep during the night following nitrous oxide anæsthesia is usually more restful. This phase of prolonged relaxation and sedation that follows a comparatively brief phase of stimulation may explain the therapeutic effect of nitrous oxide anæsthesia in acute manic states. It is to be noted that this phase of sedation does not impair the individual's capacity to carry on with his

ordinary activities, so that the treatment can be given to ambulatory patients.

The method is presented as an adjunct to the therapeutic management of acute manic states and as an addition to the pharmacological "short cuts" in psychotherapy. Complete loss of consciousness and cerebral hypoxemia are also features of insulin shock and convulsive shock therapy. While the physiological changes produced cannot compare in intensity with those of the shock treatments, the administration of nitrous oxide according to the technique described is safer, more convenient, and does not produce any disturbing aftereffects. Treatment of manic states with this method would avoid development of confusion and amnesia often associated with electrical shock therapy. We are at present studying the therapeutic results in manic-depressive patients who show early affective disturbances that have not yet produced a psychotic breakdown. The rapidity and ease with which the transitory facilitation of cortical functions can be achieved with nitrous oxide, and the associated feeling of well-being and increased self-confidence, may be valuable factors at certain stages in the course of psychotherapy.

#### CONCLUSIONS

1. Previously described methods of inhalation anæsthesia and hypoxia in psychiatric conditions have been reviewed.
2. A technique of nitrous oxide administration beyond the state of intoxication and avoiding the stage of deep hypoxemia has been described.
3. Physiological changes with this form of anæsthesia are slight and the method may be considered safe.
4. After the anæsthesia, a period of facilitation of mental processes is observed, which is followed by a period of relaxation and sedation.
5. During the phase of facilitation, the patient has a feeling of increased well-being and shows greater spontaneity, less resistance, and enhanced insight, often expressing previously repressed ideational content and affects.

6. The period of sedation lasts for several hours and is not associated with drowsiness or confusion. Sleep is usually improved the following night and other sedation is often unnecessary.

7. In states of acute manic excitement, repeated daily administration of nitrous oxide has controlled and terminated the attack in some cases.

8. Nitrous oxide hypoxia produces some of the features of the "shock treatments" as well as of narcoanalysis, but it is safe, convenient, and simple in administration and may be used in ambulatory patients without interruption of their ordinary activities.

9. The theories on the pharmacological action of nitrous oxide and the reason for its choice are discussed.

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# LATE RESULTS NOTED IN CHILDREN PRESENTING POST-ENCEPHALITIC BEHAVIOR

## A FOLLOW-UP STUDY OF FIFTY CASES<sup>1</sup>

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The Child Guidance Home in Cincinnati began to study problem children in 1920. This was at the time when the great influenza epidemic, which began in 1918, was ending and there was beginning recognition of possible sequelae in the form of encephalitis, especially encephalitis complicated by personality changes and behavior disorders. The first case of this type was admitted to the Child Guidance Home for observation in July, 1920. Since then many more cases have been admitted. While their diagnosis has been comparatively easy to make, their treatment and disposition have been extremely difficult. The latter has been especially difficult because although institutional care is indicated in almost every case, the specific type of institution required for such cases is not available. State institutions are reluctant to accept them because these children do not fit in with their programs. On the one hand, state institutions for the feeble-minded decline to admit these children because as a rule they are not feeble-minded. State mental hospitals, on the other hand, also decline to admit them on the grounds that they are not prepared to take care of children. Thus, most of these unfortunates are left to the mercy of their environment. As early as 1924, Wimmer<sup>2</sup> predicted that "these children will no doubt in the future create a lot of trouble to the public institution for the care of difficult children." The present report of the follow-up of 50 children presenting behavior disorders and per-

sonality changes following an attack of encephalitis tends to bear out this prophecy.

The cases<sup>3</sup> in this series were followed for periods ranging from 3 to 25 years, the majority having been followed for more than 15 years. Most of the patients are now adults or late adolescents.

Of the 50 children constituting this series, 39 were boys and 11 were girls and their ages at the time they were referred for study ranged from 4 to 19 years. The ratio of boys to girls studied at the Child Guidance Home has been in the proportion of 2 to 1. In this series the ratio is almost  $3\frac{1}{2}$  to 1. This would appear to agree with the findings of other investigators, namely that boys appear to be more apt to show post-encephalitic type of behavior and personality changes than girls. The 50 children were from an unselected series of 2500 children presenting all types of behavior disorders. This gives an incidence of 2%.

The exact age of onset of the disease was unknown in 10 cases. Fifty percent of the known cases fall in the age range of 5 months to 5 years. The remainder are scattered over the remaining 14 years.

Table I shows the types of encephalitis as ascertained from the medical histories. From this it will be seen that the majority (27) were of the virus type, 14 of the toxic type, and 9 of the traumatic type.

The age range of onset of the behavior difficulty or personality change showed a rather wide scatter with two peaks, one up to 5 years and the other 6 to 9 years. The age of onset of the problem was not learned in 5 cases.

In 40 cases the interval in years between

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From The Child Guidance Home of the Jewish Hospital, Cincinnati, Ohio.

<sup>2</sup> Wimmer, A. Chronic Epidemic Encephalitis. Copenhagen, 1924.

<sup>3</sup> This paper is an elaboration of a very brief presentation published in the Ohio State Medical Journal, Vol. 41, No. 11, November, 1945.

the onset of the illness and the time of onset of the problem was as follows: no interval or immediate onset in 36 cases; 1 year interval in 3 cases; 2 year interval in 2 cases; 4 year interval in 2 cases; 7 year interval in 2 cases; and one each at 9, 10, 11, 12, 13 year intervals.

It is interesting to note that although behavior disorders and personality changes were noted immediately after the onset of the disease in most of the cases, not one of the 50 cases was referred for study during the acute phase of the illness. All were referred at much later dates when persistent behavioral or personality difficulties caused

TABLE I  
TYPES OF ENCEPHALITIS

I. <i>Virus Type</i>		
1. Polioencephalitis .....	4	
2. Lethargic encephalitis .....	7	
3. Influenza encephalitis .....	6	
4. Measles encephalitis .....	3	
5. Chicken pox encephalitis .....	1	
6. Virus encephalitis of unknown origin .....	6	
		27
II. <i>Toxic Type</i>		
1. Diphtheritic encephalitis .....	2	
2. Scarlet fever encephalitis .....	2	
3. Pneumonia encephalitis .....	1	
4. Whooping cough encephalitis .....	3	
5. Meningoencephalitis .....	1	
6. Other toxic conditions of unknown origin .....	5	
		14
III. <i>Traumatic Type</i> .....		9
		—
Total		50

them to present problems to their parents or to their communities. In only 5 cases had the patterns of behavior shown by these children been recognized as causally related to the previous attack of encephalitis.

The majority of the children were referred for more than one type of behavior disorder. These ranged from such simple behavior complaints as incorrigibility, truancy and temper tantrums to the more severe types of antisocial behavior in the form of sexual misconduct, stealing and other delinquent and criminal acts. In addition some presented serious abnormal types of behavior such as extreme restlessness, wanderlust, delusions, hallucinations and other psychotic manifestations.

According to the results of psychometric tests made on admission, 2 children in this series rated superior, 16 were of average intelligence, 11 were subaverage, 7 rated borderline, and only 14 were feeble-minded. Psychometric examinations were repeated in 44 cases several years after their dismissal from the Child Guidance Home. The I.Q.'s remained the same in 9 cases, improved in one case, and deteriorated in 34 cases.

Neurological findings were present in all but 9 cases. In 24 cases there were pyramidal signs, in 9 cases, extrapyramidal signs, and in 16 cases, ocular symptoms. Two children had persistent petit mal attacks and 5 suffered from grand mal seizures. Four children showed typical Parkinsonism.

At the Child Guidance Home every child is typed on a special personality chart. Thirty-seven of the children (74%) in this series received a uniform personality rating which was fairly distinctive and characteristic. In general these children were suspicious, impulsive, egocentric and selfish. They exhibited violent temper tantrums and were extremely obstinate. Emotional instability, unreliability, and lack of initiative were outstanding short-comings. They lacked ability to concentrate and showed little or no self-control. Impulsiveness, lack of power of inhibition, extreme distractibility and unpredictability of behavior were the dominant personality traits.

The remaining 13 children received a nondescript personality rating in which the various characteristics enumerated above were not uniformly present.

The abnormal patterns of behavior which these children exhibited can be readily divided into three groups (1) simple behavioral disturbances, (2) psychopathic behavior and (4) psychotic behavior.

*Group 1.*—The children who came under the behavioral classification were restless and hyperactive and exhibited temper tantrums. They were noisy and domineering. Aggressiveness was an outstanding symptom. Stealing, lying and running away were frequent occurrences. Enuresis was often present. These children were extremely difficult to control. An example of this group is the following case report:

Billy, aged 10, was admitted to the Child Guidance Home for the first time in June, 1941, be-

cause he was unable to adjust either at home or at school. He felt that everyone picked on him and in turn his classmates complained that he hit, pinched and bit them.

According to the social history, the father and mother were incompatible. The father drank heavily and consorted with other women. The mother appeared to be a rather stable person, who considered herself responsible for the support of her family because of her husband's incompetence. Her attitude toward the child was one of over protectiveness, and toward her husband one of resigned indifference. She worked during the day and the father worked at night. Consequently, the boy had very little supervision and very little association with his parents. The father felt that Billy's problems were entirely due to the family situation. He stated that he, the father, was the only one to whom the boy had ever been really attached. The constant friction in the home made for a tense, unhappy situation. The boy received neither love nor affection from his parents and felt markedly insecure. Of significance in the boy's medical history was the fact that he had had a severe attack of measles early in infancy which was complicated by a bilateral otitis media.

At the Child Guidance Home the physical and neurological examinations were found to be essentially normal. The boy had an intelligence quotient of 121. He was hyperactive, restless and concentrated poorly. He was unable to get along with the other children and did not hesitate to throw rocks at them without any apparent cause. He was a poor sport and a coward. The children heartily disliked him and kept out of his way as much as possible. In psychiatric interviews the boy talked quite freely. He told about his home situation and said that he had been moved around a great deal. He admitted that he could not get along with children at school and said that sometimes they called him "sissy." This was because he would cry and run away if he found that he was getting the worst of any situation. He thought it might help if he were bigger and stronger and better able to stand up for himself. He stated that he did not want to live with either one of his parents alone. What he really wanted was to have a normal home with both parents present. He was well aware of the friction between his parents and was unhappy about this. The boy appeared to have fair insight into his condition. His lack of security and feeling of inferiority were very evident.

The diagnosis at this time was that most of Billy's difficulties were due to faulty parent-child relationships. It was recommended that the boy be placed in a good boarding home where he would receive the love and affection of which he had been deprived, and where he could develop a feeling of security. The recommendation was carried out. However, despite intensive social therapy, the boy did not adjust in any boarding home. He was then placed in a children's home where he also failed to adjust. The children's home asked that the boy be readmitted to the Child Guidance Home for further study. The physical and neurological findings at

this time were approximately the same as at the time of his previous study. His intelligence quotient was still 121 and his social quotient 103. Billy's behavior reactions followed the same pattern except that they were more extreme. He was provocative, restless and aggressive, had a short attention span, was undependable, destructive and slovenly about his person. The boy stole and tried to lie out of every situation. A Rorschach test made for the first time gave strong evidence of cerebral damage. His rating on the personality chart was characteristic of the post-encephalitic. The electroencephalographic tracing, however, was normal. On the basis of the present findings and the medical history of a severe attack of measles early in infancy complicated by a bilateral otitis media, it was felt that the boy was presenting a post-encephalitic type of behavior. The unwholesome home situation and the faulty parent-child relationships were also contributory but only in the sense that they had determined the trend or direction of the antisocial behavior. A recommendation for special institutional placement was made, but this could not be carried out as there was none available. Billy was therefore returned to a children's home and placed in a cottage with older boys. There he again presented so many difficulties that the children's home refused to keep him. The only other available placement was a school for delinquent boys, where he was placed. There he proved to be most difficult. He ran away repeatedly and after a short time, had to be taken home by his mother. Then the neighbors began to report that he had stolen, pulled the main light switches in apartment buildings, and rang apartment doorbells late at night. They became so upset by his behavior that they went to court, demanding that drastic measures be taken. His teachers also stated that he was the worst problem they had ever encountered. In court, the mother promised to send the boy to a military school. After a brief stay there, the military school refused to keep him. The child was again brought before the court and at the court's request, he was readmitted once more to the Child Guidance Home for further study. At this time the neurological examination showed some positive findings: right internal strabismus with bilateral nystagmus, general muscle weakness with beginning atrophy of the muscles of the right forearm, and absent abdominal reflexes. The boy's intelligence quotient had dropped to 108. His behavior at the home was extremely belligerent and he was abusive to the other children. He ran away several times and proved to be a nonconformist in every way. Psychiatric interviews were not very productive as it was difficult to make satisfactory rapport with him. He bragged about his escapades and stated constantly that he had "done nothing wrong" and that everyone else was to blame for his difficulties. Although he had been in many serious difficulties he minimized these and refused to admit that he had committed any wrong. The mother, too, in interviews, took the same attitude as Billy. She felt that he had not been given a fair chance and that in most of the difficulties in which he had been involved, he was not to blame.

All who observed the boy felt that he was potentially dangerous and that in order to protect society it was necessary to institutionalize him. The only available placement was a hospital for the mentally ill, where he was admitted late in 1945.

#### COMMENT

This case illustrates the insidious nature of the disease in a boy whose behavioral difficulties at first appeared to be due entirely to faulty personal and interpersonal family relationships. However, on repeated examinations made over a period of years, it became apparent that his continued antisocial behavior was on an organic basis. Furthermore, despite the fact that there was no history of an attack of encephalitis, the history of a severe attack of measles complicated by a bilateral otitis media plus neuropathological findings and the distinctive pattern of the boy's behavioral reactions permitted the diagnosis of post-encephalitic behavior disorder.

*Group 2.*—Of those who presented psychopathic types of behavior, some were phlegmatic and apathetic and apparently indifferent to what was going on around them. They gave the impression of being dull intellectually even though their intelligence quotients as shown on the psychometric tests were normal or above normal. They were asocial and made very little effort to enter into group activities. They concentrated poorly and were either unable or unwilling to carry out instructions. The majority of this group, however, were extremely restless, hyperactive and lacked ability to concentrate. In many instances, they were vicious, cruel and apparently deliberately abusive to other children. The unpredictability of their behavior was outstanding. Night terrors, sleep walking, respiratory difficulties, food fads, habit tics were frequent complicating symptoms. Case 2 is illustrative of this group.

William, a white boy age 13, was admitted to the Child Guidance Home in January, 1930. The reason for his referral was that he had been involved in petty thefts and truancy for a long time. The social history revealed that he was an instrumental baby, the mother dying in childbirth. The father was alcoholic, and was killed by a train when William was 2 years of age. At first he was cared for by maternal aunts and later boarded out. There was little material available regarding his early developmental history. It was noted, however, that the boy had suffered from various acute infectious

diseases in infancy and early childhood with continuous middle ear involvement.

The physical examination made at the Child Guidance Home was essentially normal except for a bilateral otitis media, with a hearing loss of approximately 50% in both ears. The neurological examination revealed many positive findings in the form of unequal pupils and pyramidal tract signs. His intelligence quotient was 109.

At the home, William proved to be a friendly boy who was liked by everyone because of his frankness and willingness to be of service. It was noted that he was emotionally unstable, socially immature and showed a marked feeling of insecurity. He was unable to carry out his good resolutions, although he apparently tried very hard. He wrote well, was a good musician and a leader in the club activities. He loved the Child Guidance Home and begged to be allowed to remain permanently. The boy talked freely and willingly in psychiatric interviews. He made good rapport with the psychiatrist and social workers. He appeared to have some insight into his condition. He admitted that he was weak-willed, had many fears and always needed someone on whom he could lean. New experiences particularly frightened him. At this time it was felt that despite the fact that the boy was suffering from an organic involvement of the central nervous system of unknown origin, the unfortunate early conditioning had made the boy antisocial. It was therefore recommended that he be placed in a school where he would be under strict disciplinary care, and at the same time receive psychotherapy. This recommendation was not carried out and he remained with the aunt with whom he had been living. However, his truancy from school became such a problem that, at the insistence of the attendance department, the aunt placed him in a private military school where he remained for some time. Returning to his aunt for his summer vacation, he immediately got into trouble. He was charged with stealing, attacking a five-year-old girl, and driving a stolen car to a far distant city. He was then cited to court. Before he could be tried, the aunt returned him to the military school, but he ran away almost immediately, returning to Cincinnati, where he lived at several different hotels giving fictitious names, and leaving the hotels without paying. Again the boy was brought into court and referred to the Child Guidance Home for another period of observation.

Here it was noted that with the exception of the chronic otitis media which had become worse, all of the other physical examinations were essentially the same as on the first examination. The boy was still friendly and very gregarious. However, he concentrated poorly, was unreliable and irresponsible. In psychiatric interviews, the boy's extreme immaturity was apparent; likewise, his poor concentration and inability to follow through. He admitted being weak-willed and said that he readily followed any leader and so became involved in trouble. He stated that he was more restless than he had ever been and just wanted to run away from everything. Everybody and everything irritated



him and he felt at times that he could not control himself. In one interview he said, "I'm afraid of the beginning of everything and afraid I can't do it. I like people after I'm with them and I get along with them. I'm unhappy. I don't like being on my own and I always get into trouble where I am." This time the diagnosis was that the boy's behavior problems were due in part to an organic brain involvement probably as a result of some acute infectious disease, which had been complicated with an encephalitis. The recommendation for custodial care in a special kind of institution, equipped to care for him for life, was recommended.

Again the recommendation was not carried out. Shortly thereafter, word was received that the boy had been arrested in Los Angeles, where he was committed to the Preston State School. Later in the year, William returned to Cincinnati. Following this, his aunt again placed him in a military school from which he promptly ran away.

William's history from then on was a repetition of what had gone on before. He refused to stay in any one place, held jobs for just a few days, incurred debts, stole and burglarized. During the succeeding years, he was in the City Workhouse, the Boys' Industrial School (State Reformatory) and Federal Reformatory, where he is at present.

#### COMMENT

When first seen at the age of 13, the diagnosis of post-encephalitic behavior disturbance was not made in spite of the presence of neurological findings and a chronic discharging ear. However, subsequent observation of the boy's behavior proved that the organic brain changes, encephalitic in nature, were basically responsible for his intractable and irreversible psychopathic behavior.

*Group 3.*—Those children who were classified as psychotic showed severe disorganization of cerebral function. They were careless of their personal appearance and were slovenly in all their habits. Moodiness, crying spells and irrelevant chatter were often noted. Outbursts of screaming and causeless laughter were also often present. Occasionally hallucinatory phenomena were in evidence. These children had no insight whatsoever into their condition. It was impossible to control them and they would become violent when thwarted. Some refused to wash, bathe or change their clothes, very often insisting on going to bed in the clothes they had worn during the day. Rapport with them was impossible. Their behavior was comparable in many respects to that of the

hypomanic. An example of this group is the following:

Roy was admitted to the Child Guidance Home in February, 1927, at the age of 13 years. It was stated that the boy had been a behavior problem for 2½ years. The social history revealed that the father had been in poor health for many years, and that the mother was nervous because of worry over her son's conduct. She helped support the family by conducting a small notion store. They had been independent until just recently when they were forced to ask for financial assistance from a local social agency. There were 4 siblings, 3 boys and 1 girl, all in good health and doing well at school. They presented no behavior problems. The developmental history showed that Roy's birth and early development had been normal. He had had chicken pox, measles and whooping cough. The boy had an attack of acute epidemic encephalitis at 9 years of age.

At the Child Guidance Home the physical examination was essentially negative, but there were positive signs of pyramidal tract changes. The boy had an intelligence quotient of 122. From the moment he entered the home it was noted that he was extremely difficult to control. He was impulsive, egocentric, depressed and suspicious. He exhibited violent temper tantrums during which he was unmanageable. His emotional instability was marked. The children obviously annoyed him and he did not hesitate to bite pieces out of their arms and legs when he became angry. There was no one with whom he could get along. He was extremely irritable and a serious sex problem. His whereabouts were never known since he ran away 5 and 6 times a day. There was no way of appealing to him or obtaining his cooperation. He did as he pleased and did not hesitate to destroy or injure anything or anyone in his path. He had unusual physical strength and on one occasion tore a tie off one of the children. In forcibly removing the tie he almost choked the boy. There were times when Roy appeared to be tractable and affectionate. At such times he would put his arms around anyone at the home and act in a tender and loving manner, but a moment later his mood would change and he would try to injure the object of his former affection. Such bizarre behavior as plucking hair from a child's head or sticking another with pins was of frequent occurrence. He could not be left alone with the other children and because of his unusual physical strength, no adult person at the home was able to handle him alone. The children were in mortal terror of him. In psychiatric interviews, contacts were on an extremely superficial level because of the boy's apprehensiveness, antagonism and unwillingness or inability to respond. Attempts to reassure him and to get him into a more responsive frame of mind were unsuccessful. In most of the interviews he refused to answer at all and would sit with his head in his lap. Occasionally he spoke about his family. He was bothered about the poor economic conditions in his home. He felt that his mother did not have enough money to take care of

the family properly. He showed many fears, particularly of the laboratory tests. There was no evidence of delusions or hallucinations.

It was felt that the boy had had an attack of lethargic encephalitis with resultant psychiatric disturbances, principally in the sphere of volition. It was recommended that he be institutionalized. The parents were both ununderstanding and uncooperative, and made no attempt to carry out the recommendation. A year later the mother reported that the boy had been committed to the Boys' Industrial School (a state correctional institution) as a result of conviction on a charge of assault and battery. The boy's record at the industrial school was very bad. He did not adjust in any way. He was paroled in March, 1929, and returned to his home. A short time later he was arrested and sent to a state hospital for the mentally ill where the same diagnosis as that given at the Child Guidance Home was made. Later in the year, another report from the hospital stated that he had become much more difficult, was quarreling with the other patients, attacking them and threatening everyone with assault. In October, 1931, the state hospital reported that Roy was home on trial visit. He was attending classes in high school. However, after being home for 8 months, he had to be returned to the hospital because the family could not control him. Each year Roy's behavior has become more difficult. In January, 1946, at the age of 32, he was still in the state hospital where it was reported that his behavior was both bizarre and unpredictable. His intelligence quotient was still 122.

#### COMMENT

This case illustrates the psychotic sequelæ of lethargic encephalitis. In this instance there has been no intellectual deterioration even though the condition has existed approximately 20 years.

As stated above, these children have been followed for periods ranging from 3 to 26 years, the majority having been followed for more than 15 years. Their present age range is from 10 to 43 years.

In the great majority of the cases, various types of social and medical therapy have been tried in order to bring about a social adjustment or at least an amelioration of the symptoms. The results have been highly disappointing. Only 9 of the 50 cases are at present adjusted.

In the group of adjusted children, there were 6 boys and 3 girls. The onset of the illness occurred in infancy in 2 cases, in 2 at 3 years, in 1 each at 4, 5, and 7 years, and in 2 at 8 years. Behavior difficulties appeared immediately after the illness in 7

cases, in one 10 years after the illness, and in one 11 years after the illness. Seven had had the virus type, 1 the toxic, and 1 the traumatic type of encephalitis. No cases were referred at the immediate time of onset of the problem, the time of referral varying from 1 to 13 years afterwards. These cases were followed for periods ranging from 4 to 22 years.

Six of the children had positive neurologic findings. One developed epilepsy. At the time of admission, 2 of the children had normal intelligence, 3 subaverage, 1 borderline, 2 were morons and 1 was an imbecile. However, only 2 on later retests showed intellectual deterioration and this was very slight. Four (3 boys and 1 girl) had the typical personality makeup of the post-encephalitic as determined on the Child Guidance Home's personality rating chart.

These children made a fairly good adjustment while at the Child Guidance Home. To a certain extent, they were amenable to reason and to discipline. However, they were markedly restless and lacked ability to concentrate. Their attention span was extremely short. For the most part they preferred being by themselves and did not become a part of the group. Psychiatric interviews were productive of good results as rapport was fairly good. They appeared to have some insight into their condition and were thus able to state many pertinent facts regarding their illness. From the standpoint of their patterns of behavior, 4 were classified as psychopathic, 1 as psychotic, and 4 as behavioral problems. Three children were placed in institutions where they have adjusted very nicely. Six children have adjusted in the community. In fact, 5 boys and 1 girl served in the armed forces with good records. One of the girls and one of the boys are now married.

Forty-one of the 50 children studied have remained unadjusted. Of this number, 32 were boys and 9 were girls. The onset of the illness occurred in infancy in 17 cases, between the ages of 3 and 5 in 13 cases, between the ages of 6 and 10 in 10 cases, and at the age of 18 years in 1 case. The behavior problems were in evidence immediately after the illness in 29 cases, and in 3 cases, 1 year after the illness. In the re-

maintaining 9 cases, the time of onset of the behavior difficulties ranged from 1½ years to 12 years after the illness. Twenty had been diagnosed as the virus type, 13 the toxic, and 8 the traumatic type of encephalitis. Only 1 case was referred at the time of the onset of the problem, the others being referred from 1 to 16 years later. These cases have been followed for periods ranging from 2 to 26 years.

In many of these children marked physical disturbances, such as chronic otitis media, tuberculosis, cardiac involvement and nephritis, were found. In addition, 30 showed positive neurological findings. The findings were both of the pyramidal and extrapyramidal type. Four presented the Parkinson syndrome and one suffered from oculogyric crises. Thirteen developed convulsive disorders.

At the time of their first admission to the Child Guidance Home, 2 of the children had superior intelligence, 15 rated average, 7 subaverage, 6 borderline, 7 were morons and 4 were imbeciles. Retests of these children many years later showed that intellectual deterioration had occurred in 32 cases. In some the deterioration was very severe. When rated on the personality chart, 33 of the 41 were found to have the typical personality makeup of the post-encephalitic. The remainder received atypical personality ratings.

All these children had made a poor adjustment at the Child Guidance Home. They could not get along with anyone, were aggressive, restless, showed poor coordination, and lacked the ability to concentrate. Their later conduct in general was characterized by their lack of conformity, running away repeatedly, and failure to profit by experience or from instruction. Psychiatric interviews were unproductive. The children appeared to be inaccessible and all showed complete lack of insight into their condition. From the standpoint of their patterns of behavior, 11 fell in the psychotic group, 19 in the psychopathic group, and 11 in the behavioral group. Institutional placement had been recommended in all of these cases. The reports from the institutions where most of the children were placed are that they have all failed to adjust. Those children who

were not institutionalized and are still in their homes, are presenting marked behavioral problems.

Comparison of the adjusted and unadjusted groups reveals some rather significant differences. In the unadjusted group there is a preponderance of the toxic and traumatic forms of encephalitis. Severe neurological sequelæ were also more prevalent, 13 of the children in this group having developed convulsive seizures in contrast to but 1 in the adjusted group.

A very noticeable and significant difference between the two groups was the much greater number of children in the unadjusted group who showed intellectual deterioration; specifically 32 (78%) in the unadjusted group compared with only 2 (22%) in the adjusted group.

Another significant difference was the proportionately larger number of children in the unadjusted group who had the typical personality characteristic of the post-encephalitic. There were 33 (80%) in the unadjusted group in contrast to 4 (44%) in the adjusted group.

There was considerable difference in the two groups from the standpoint of types or patterns of behavior. The number of children exhibiting psychopathic and psychotic behavior was far greater in the unadjusted group, 73% compared to 55% in the adjusted group. This was especially noticeable in the number showing psychotic reactions.

Lack of insight and accessibility to psychiatric approach was much more pronounced in the unadjusted group than in the adjusted group.

## DISCUSSION

Encephalitis illustrates better than any other disease that changes in the structure of the brain may lead to changes in function. Since the encephalitic process may attack any part of the brain, the disorganization of function will correspond to the level or levels of the brain stem involved. Hence, vegetative, motor or intellectual dysfunction either alone or in combination may be present.

There is considerable diversity of opinion regarding the genesis of the psychopathological train of events. According to some

investigators, the encephalitis merely brings out character defects and abnormal personality traits that were already present but had been dormant.

According to others, encephalitis does not necessarily accentuate the premorbid personality. "The tragic feature of encephalitis is personality change, not personality exaggeration."<sup>4</sup> This belief seems to be borne out by the fact that the psychopathological after effects of encephalitis are much more pronounced in patients affected early in life. From our study, it would appear that the younger the patient affected by the disease, the greater the likelihood of psychiatric sequelæ. In 50% of our series of cases, the age of onset was under 5 years.

This brings up the question of the incidence of such after effects. Bender<sup>5</sup> reported 55 cases of encephalitis in a series of 4000 children with all types of behavior disorders. This is an incidence of 1.4%.

Our series of 50 cases was culled from a group of 2500 children showing all types of behavior disorders which gives an incidence of 2%. From our more recent experience with post-encephalitic type of behavior we feel that the disease, as a complication of acute infectious and contagious diseases of children, is frequently overlooked. One of the reasons for this may be the fact that the neurological examination is very often entirely negative. Another reason, and probably a more potent one, is the fact that in the great majority of cases, there is no history of an attack of encephalitis. It is only when the medical history of the child, as well as his behavioral reactions are carefully scrutinized and evaluated from the standpoint of a possible encephalitic episode complicating an acute infectious or contagious disease occurring in the first decade of life, that the condition becomes apparent. We are in agreement with Bender<sup>6</sup> that "The diagnostic criteria for encephalopathic behavior disorders are now considerable. Even without the history of a specific etiological factor or evidence of the specific (neuro) pathology, the diagnostic methods which may

be applied to fields of behavior are sufficient to establish a diagnosis."

Furthermore, the longer a case is followed, the more characteristic the clinical picture becomes. Very often where only a suspicion of the condition was originally noted, re-examination years later easily established the correctness of the tentative diagnosis. As time goes on the pattern of behavior and characteristic personality structure become more clear cut and pathognomonic. The first 2 cases cited in this report illustrate this point very clearly. In these facts are borne in mind, many more cases of intractable behavior disorders and irreversible personality changes will be found to fall into this category.

#### SUMMARY AND CONCLUSIONS

A report on the follow-up study of 50 children presenting behavior disorders and personality changes following an attack of encephalitis is presented.

The cases were followed for periods ranging from 4 to 26 years, the majority having been followed for more than 15 years.

Of the 50 children constituting this series 39 were boys and 11 were girls, a ratio of more than 3 to 1. This tends to bear out the findings of other investigators that boys are more apt to show post-encephalitic type of behavior and personality changes than girls.

The 50 children composing this series were taken from an unselected series of 2500 children presenting all types of behavior disorders. This represents an incidence of 2% and indicates that the condition is by no means rare. The diagnosis will be made with even greater frequency once it is recognized that it can be made on the basis of the characteristic behavior reactions and personality changes even without a specific history of a previous attack of encephalitis or the presence of neuropathological changes.

The age range of onset was in the first decade of life in 49 of the cases, 50% occurring before the age of 5 years. Furthermore the younger the patient when affected by the disease, the greater the likelihood of psychiatric sequelæ.

The types of encephalitis as ascertained from the medical histories showed that the

<sup>4</sup> Neal, Josephine B. Encephalitis—A Clinical Study, p. 356.

<sup>5</sup> Ibid., p. 368.

<sup>6</sup> Ibid., p. 379-380.

majority (27) were of the virus type, 14 of the toxic type, and 9 of the traumatic type.

In the great majority of the cases (36) the behavior difficulty or personality change was noted immediately following the attack of encephalitis. In spite of this, most of the cases were referred for study many years after the onset of the illness.

The majority of the children were referred for more than one type of behavior disorder. These covered the usual range of problems ordinarily studied at child guidance clinics. The abnormal patterns of behavior which these children exhibited could be readily divided into 3 groups (1) simple behavioral disturbances, (2) psychopathic behavior, and (3) psychotic behavior.

When these children were first studied, 14 were found to be feeble-minded and seven rated borderline. The remainder were either of average or superior intelligence. Forty-four of the children were retested several years later. The I.Q.'s remained the same in 9 cases, improved in 1 case, and deteriorated in 34 cases. The frequency of intellectual deterioration is worthy of note as it seems to refute the prevailing belief that the most severe and lasting damage is in the emotional sphere in contrast to the preservation of the intellect.

Neurological findings were present in all but 9 cases. These were both of the pyramidal and extrapyramidal type. Ocular symptoms were present in 16 cases. Two children had petit mal attacks and 5 suffered from grand mal seizures. Four children showed symptoms of Parkinsonism. It should be noted that in some cases, the neurological findings appeared many years after the onset of the behavior difficulties.

Thirty-seven (74%) of the children in this series had a uniform and characteristic personality structure. In all the cases there was an underlying basic uniformity to their

patterns of behavior which was fairly characteristic.

Only 9 of the 50 children have made a fairly satisfactory social adjustment; this despite the application in the majority of cases of the best available medical, psychiatric and social therapeutic techniques.

The 41 children who failed to make satisfactory social adjustments differed in certain fundamental respects from the 9 who did adjust. Among these differences may be mentioned (1) the preponderance of the toxic and traumatic forms of encephalitis in the unadjusted group; (2) the greater number of neurologic sequelæ such as convulsive seizures, Parkinsonism and psychoses in the unadjusted group; (3) the proportionately larger number of children in the unadjusted group who showed intellectual deterioration; and (4) the larger number of children in the unadjusted group who showed the characteristic personality make-up of the post-encephalitic. These criteria, therefore, furnish a possible prognostic basis for the determination of the ability of the child showing post-encephalitic behavior to adjust socially.

It is important that this condition be recognized if for no other reason than that the blame for failure to secure good results may be placed where it belongs. The failure of social therapy and psychotherapy in these cases cannot be attributed to faulty social or psychiatric techniques. Rather, such failure indicates that the problem of the child presenting post-encephalitic behavior disorders or personality changes is not solely one of psychopathology and psychodynamics. The psychopathological symptoms are primarily the results of the neuropathological changes and it is our present inability to correct the latter which accounts for the failure of treatment. These cases illustrate very pointedly the relation of function to structure in human behavior.

# REACTIONS AMONG ALLIED PRISONERS OF WAR SUBJECTED TO THREE YEARS OF IMPRISONMENT AND TORTURE

BY THE JAPANESE<sup>1</sup>

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Throughout man's history wars have been fought in which prisoners have been taken, herded together in confinement, maltreated and starved without knowing when, if ever, release would come. Although such events offered unusual opportunities for psychological study, very little on the subject is available in the literature. After World War I Vischer(1) published general observations of the behavior and reactions of large groups of allied soldiers in various German prison camps but included no detailed or individual personality studies. Several personal narratives of soldiers have also been published(2-9) but, according to a comment by Kinnear Wilson in 1919(1) "... what is wanted is expert evidence on the matter . . . none of the British narratives give any research on this point carried out by experts and perhaps the opportunity has been lost." A statistical survey of abnormal findings among Americans who survived imprisonment by the Japanese has been published(10) as well as the observations of a social worker who worked with American prisoners after repatriation from Japanese prison camps(11). Other brief notes on the effects on British soldiers of imprisonment by the Germans have also appeared(12, 13). The present study has attempted to utilize, in part, the opportunities for investigation provided by the recent conflict in the Pacific. By a detailed study of individual behavior before, during and after an experience of extreme environmental stress it was hoped that disturbances which occur under the ordinary circumstances of

life during efforts to deal with adverse situations might be illuminated.

The first recapture from the enemy of a large group of Allied prisoners of war of the Japanese occurred when the Americans invaded Luzon in January 1945. The approximately three years of captivity of this group constituted an unusual experiment of nature which might serve to point up sufficiently the various devices used by differing personalities under stress so that the dynamics of emotional disorders might be better understood. The traumatic stimulus was an unusually strong one, the circumstances to which the men were subjected were fairly uniform, and the men themselves although coming from widely differing economic levels were of approximately the same anthropologic background and had roughly the same sets of social standards and values.

## METHOD

Thirty-five individuals selected at random from the group of prisoners of war liberated in Luzon were studied, as well as 5 others later freed in Japan. The group comprised 34 men and one woman. There were one Dutch and 6 British soldiers, 2 United States sailors, 2 United States marines, 14 United States soldiers, one United States Naval officer, 8 United States Army officers, and one United States Army nurse. These subjects were observed during the period from 5 to 20 days following their release from imprisonment. In order to make the evaluation as objective as possible observations were made individually by each author and the data in each case consolidated later. Eight of the patients were further examined after intravenous injection of 0.5 grams of sodium amytal.

Since their return home it has been pos-

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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sible to follow two-thirds of these subjects by either personal interview or letter.

In addition to the detailed personality studies of the 35 individuals a general survey was made of the patterns of reaction among all the prisoners from the testimony of the individuals studied in detail. Three of the latter were doctors who cared for the prisoners throughout their captivity.

### THE STIMULUS

The hostile landing of the Japanese on Luzon Island in the Philippines occurred December 9, 1941. Manila was captured January 2, 1942. For 4 long months a delaying action was fought on Bataan Peninsula but finally that jungle battlefield was surrendered April 9, 1942. The last stand was made on the fortress of Corregidor at the mouth of Manila Bay. Corregidor fell May 6, 1942, and most surviving Americans became prisoners of war of the Japanese.

The story which follows was compiled from the testimony of the 35 prisoners who comprise this study. Rumors and data obtained through hearsay have been omitted and only the first-hand experience of these patients is recorded. Their testimony is amply confirmed by a State Department publication(14) and other sources(8, 9). These data are presented in order to indicate as far as possible the character of the environmental stress in this experiment of nature.

### INITIAL PSYCHOLOGICAL TRAUMA

Hope of reinforcement or rescue was consistently fostered among the Americans fighting in the Philippines until President Roosevelt indicated in a radio speech on February 22, 1942, that the Philippine garrison would fight a delaying action so that mobilization of American forces might be effected further south in Australia before that country fell to the Japanese. Most of the patients in this study were not surprised by this development. They fought with fierce tenacity but many of them stated that there was a widespread feeling among the forces of having been deserted by the country for which they were fighting. This feeling was enhanced when General MacArthur was

called to Australia and it is generally reported that this event was greatly resented among those who were left to fight. By February hardly any rations of food were reaching the fighters and again the prevailing downheartedness was aggravated by a rumor that there were huge untouched stores of food on the island fortress of Corregidor. The fighting was taking place in dense woods for the most part. Units were separated from one another and from their command. Communications were ruptured. Many soldiers were lost and those who still had ammunition did not know where to shoot or indeed where to turn. In the confusion orders were indistinguishable from rumors and American and Philippine soldiers, tired, beaten and sick were wandering about the roads and the jungles not knowing what to do next. Perhaps this early phase of the emotional stimulus to which these people were subjected and which gave rise to anxiety, resentment, despondency and bewilderment can be better visualized than described.

### CONFUSION, CRUELTY, DISEASE, LACK OF FOOD AND SHELTER

The chaos and confusion which prevailed during the days before surrender were not relieved when the Japanese took over. They seemed wholly unprepared to manage a large body of prisoners of war. The individual guards seemed to be given free rein in the treatment of the prisoners. They were capricious, unpredictable and, owing to the discrepancy in language, difficult to understand. When orders were not promptly carried out they were vindictive and cruel. Approximately 11,000 Americans surrendered at Bataan, April 9, 1942. Most of them were required to make the "death march" from Mariveles to Camp O'Donnell, a distance of about 100 miles. Most of the journey was accomplished on foot but part of the way they were carried in baggage cars. It took various groups from 5 to 12 days to make the trip. Approximately one-fifth of the group died along the wayside, many stragglers having been shot or bayoneted by the guards. There was no general issue of food. From time to time small quantities of rice were given out but many of the men re-

ceived nothing to eat throughout the entire period of the march. Water was available in artesian wells as well as streams and puddles many of which were contaminated. Upon arrival at O'Donnell most of the prisoners had diarrhea and edematous legs. There was little food and the quarters were crowded. Medical care consisted of only what the American prisoners were able to provide for themselves. During the first 6 weeks at O'Donnell 1492 Americans died. Those prisoners who managed to escape capture at Bataan were taken at the fall of Corregidor, May 6, 1942. Most of them were brought into Manila Harbor on a ship. The prisoners were discharged from the boat into shallow water and made to walk ashore parading before the citizens of Manila to Bilibid Prison. Bilibid had been an old Philippine penal institution, long condemned.

Fifty-six American nurses were among those taken prisoner on Corregidor. They were moved to Santo Tomas University where they were imprisoned with a conglomerate group of male and female internees of many nationalities and all ages. Their food consisted of rice in inadequate quantities with occasional bits of fish, dried meat and greens.

#### CRYSTALLIZATION OF THE PROGRAM AND ATTITUDES OF THE JAPANESE CAPTORS

At first there was no organization of the activities of the prisoners but within 2 or 3 months most of them were assigned to prison camps from which they were sent out on labor details. The nurses were left in Santo Tomas throughout their captivity, crowded in among the civilian internees. Most of them saw little of the Japanese. The administration of the various prison camps was provided by the senior American officers. Most of the camp commanders were lieutenant colonels, since the full colonels and general officers had been transferred to Japan promptly following surrender. The commanders were responsible for administering the camps according to the policy of the Japanese officer-in-charge. They arranged for the distribution of rations, the discipline of the personnel and from their complement they were required to meet

quotas for the laboring details. The fact that American officers were forced to carry out the cruel and internationally illegal policies of the Japanese gave rise to strong resentment among the soldiers. They felt that somehow their officers should have been able to protect them. The prisoners were listed in groups of 10 and the announcement was made that if one of the 10 escaped, the other 9 would be executed. Few prisoners escaped.

Communication with home was almost non-existent. Many received post cards 6 months or a year old which were limited to a few stereotyped words. Approximately twice a year the prisoners were allowed to check items on prepared cards to be sent to their families. Few of these ever reached their destination. Prisoners who were considered sick enough to be in bed were sent to Bilibid where a hospital was maintained by American medical officers whose drugs were supplied by the International Red Cross. The bed patients were excused from work, while the ambulatory ones were sent out on laboring projects each day.

One of the largest prison camps was at Cabanatuan in central Luzon. The prisoners at this camp maintained a farm. Enlisted men and junior officers were required to labor there throughout the light hours of the day. The various details were supervised by American officers under the surveillance of Japanese guards. The prisoners were not allowed to talk to one another. Almost the entire produce of the farm was shipped away. Severe penalties were inflicted on prisoners who attempted to consume a part of their harvest. Here and elsewhere most punishments consisted of beatings accomplished with gunbutts or shovels. Less violent punishments consisted of forcing a prisoner to stand at attention in the sun for several hours or forcing him to hold a chair over his head for half an hour. Many times a whole laboring gang was punished for what was considered the misdeed of one of them. Many prisoners had their finger-nails, toenails and teeth pulled out. The Japanese would often stand on a chair or box and repeatedly strike a tall American in the face with his gunbutt or, more rarely, his fist. Many of the prisoners denied their captors



satisfaction by laughing during the beatings. Occasionally, Americans were beaten for failure to bow in deference to Japanese. All of the patients included in this study observed cruel physical violence being inflicted upon American prisoners. Most of them experienced it themselves. Those who did not submit to such treatment in a servile manner were often beaten to death, shot or bayoneted.

From time to time groups of relatively hardy men were sent out from the prison camps to work for several weeks or months at a time on special construction jobs. The assignment to work at Nichols Airfield was generally conceded to be the most arduous one of all. The job of clearing and grading was accomplished entirely with hand tools. Although there were a few idle tractors and graders lying about, the Japanese seemed to be reluctant to put them to use. Day after day about 400 prisoners worked on Nichols Field with pick and shovel. Workers who seemed slow were beaten with pick handles or shovels by the Japanese guards. Inconsistent with the seeming haste to complete the airfield was the fact that the guards often relieved two or three prisoners from work for several hours and inflicted tortures on them for entertainment. One popular torture was "the water treatment" in which the prisoner's stomach was distended with water through a long rubber tube. Then the tormentor often jumped up and down on the victim's stomach. A medical officer who tried to restrain a Japanese officer from giving the "water treatment" to a prisoner suffered a broken jaw from the butt of a revolver. The "sun treatment" was another favorite torture resorted to for the amusement of the guards. In this, a prisoner was tied to the ground with his face directed toward the sun. His upper eyelids were then rolled up on thin sticks so that he was unable to close his eyes. American prisoners were left in such a position for hours at a time.

At Nichols Field even the commanding officer, a sadistic Japanese naval officer named Moto, found pleasure in inflicting suffering on his captives. It was evident that his principal concern was not in the completion of the airfield. Not only were his prisoner laborers inadequately fed and sick much

of the time with malaria and dysentery, but they were periodically forced to get out of bed in the middle of the night and do push-ups for half an hour or make a cross country hike. When Moto was finally transferred from Nichols Field to Singapore, he caused all the prisoners to stand in formation and wave good-bye to him. Several months later, the prisoners were disappointed to learn that Captain Moto had been killed in action because each cherished the hope of one day killing him with his own hands.

Since the Japanese culture recognized suicide as the honorable recourse in defeat they held those who surrendered in special contempt. It was their policy to humiliate and degrade by physical violence not only Americans but all those under their control including the Philippine civilians. A little boy and girl who tried to give cigarettes to one of the prisoners were intercepted, thrown repeatedly on the hard ground and then beaten to death. The Japanese even inflicted corporal punishment on their own soldiers. One Japanese private was beaten to death in the presence of American prisoners for some unknown offense.

#### EXTRA CURRICULAR ACTIVITIES

Since the prisoners were assigned work details which consumed at least 12 hours a day they had little time or energy for other interests. Some of the prisoners were glad of this and felt that they were better able to tolerate the experience. "We just got up and worked, came home exhausted and slept. It was the same day after day. If we'd stopped to think we could not have stood it. We tried not to think of home or anything." A few felt more secure during efforts to keep their intellects active. One spent his non-working hours solving problems in physics. Several radios were constructed secretly. One or two of these clandestine radios were maintained at Bilibid throughout the period of captivity. The nurses also had a radio at Santo Tomas and generally they were more inclined to encourage the passage of time by keeping their minds active than by suppressing their thinking. They were permitted the use of the library and many of them took courses at the university.

## PRISONERS TAKEN TO JAPAN

Those in the group finally liberated in Japan had been taken prisoner at Bataan or Corregidor and had spent many months in captivity in the Philippines before being transported to Japan. While being transferred they had been subjected to unusually harsh treatment. In Japan they did laboring work and were treated, in general, like those who remained in the Philippines, although in some camps conditions were slightly better in Japan and a few recreational facilities such as playing cards were available. Some of the men spent nearly all their non-working hours playing cards.

## PRISONERS NOT CAPTURED IN THE PHILIPPINES

The 6 British soldiers were captured at Singapore, where they remained for 6 months being fairly well fed and treated. They were later sent to Thailand to work at constructing a railroad. This was extremely arduous labor and often lasted 16 hours a day. The one Dutch soldier in our study was captured in Java, sent to Singapore and thence to Thailand, where he joined the British group. During the summer and fall of 1944 contingents of the healthiest survivors were placed aboard ships bound for Japan. They were crowded into the holds without sanitary facilities of any sort and were given very little to eat. Virtually all contracted diarrhea. One man was removed from a ship at Manila because he was considered moribund. The others reached Manila because their ships happened to be torpedoed near there and they were picked up by a Japanese coastal patrol and brought to Bilibid prison.

Treatment by the Japanese became less cruel as liberation by the American forces became imminent. Through rumors, information from guards, Philippine civilians and clandestine radios, prisoners had a fairly clear picture of the progress of the war. Rejoicing among the prisoners following the American landings at Lingayen was mitigated by apprehension about what the Japanese might do to them before they could be liberated.

## GENERAL BEHAVIOR OF PRISONERS

The behavior of the individuals exposed to these strenuous circumstances varied throughout the range of human nature. The need for food was an important determining factor and it was found that moral integrity could be pretty well judged by inverse ratio to one's state of nutrition. The regular daily ration for the prisoners consisted only of 5 to 6 ounces of rice which was often mouldy and to which occasionally were added small quantities of dried fish, vegetable greens or sweet potatoes. The physician prisoners estimated the average calorie intake of the prisoners at Bilibid during the last 4½ months of captivity, at 750 calories daily. Individual packages of food and vitamins were sent to the camps by the International Red Cross at Christmas 1942 and 1943. The meager food allowance was distributed by camp commanders and most of these managed to avoid any undue weight loss. Some of the enlisted men kept well nourished because they acted as mess boys for the Japanese. Many prisoners scorned such servility and preferred to starve. A few at Bilibid Prison in Manila foraged in the garbage cans containing scrapings from the plates of the Japanese. It was a source of amusement to the latter to watch Americans digging about in the refuse for food. One of the men was fortunate enough to obtain a job as a bus driver in Manila where for 3 months he was free to come and go at will. During this period he lived in an apartment in the city where he was able to entertain Philippine girls. His weight rose from 140 to 205 pounds. One non-tuberculous subject managed to gain hospitalization on the tuberculosis ward where he was allowed to remain throughout much of his period of captivity profiting by whatever amplification of diet was allowed. Most of the prisoners, however, preferred laboring to sitting about in a hospital. Curiously, some of the men had such a craving for tobacco that they traded food items for cigarettes. Many others gave up smoking and traded whatever tobacco they got for food. The extreme monotony and cheerlessness of their surroundings led to trouble some irritability among the men with frequent quarrels over insignificant matters.

## ILLNESS

All the patients studied were ill at one time or another during their imprisonment. Most had had dysentery. Twenty-five gave a history indicative of wet beri-beri and 23 of dry beri-beri. Exacerbations of beri-beri were common during bouts of diarrhea. Most patients noted distinct improvement during the times when Red Cross vitamins were available. When they were at the 9th General Hospital a high percentage had malaria, pellagra, scurvy and infectious jaundice. Many complained of night blindness. Mastitis with enlargement of breasts was also common(15). Mental changes occurred either subjectively or objectively in nearly all the survivors studied. Only 4 of the 35 said that there had been no alteration in their thinking. At the time of examination 17 showed obvious evidences of abnormal mentation. The predominant involvement of memory, retention and recently learned skills suggested that the changes were organic in nature and may have been related to vitamin deficiency. Common physical findings were: muscular weakness, ascites, ankle edema, absence of tendon reflexes and abdominal, cremasteric and plantar responses, diminution or absence of all types of sensation, hyperesthesia, especially in the feet, decrease in visual acuity and partial deafness. Bing and Vischer who studied Allied prisoners in a German camp during the first world war also noted that loss of memory, impairment of concentration and diminution of visual acuity were common(16). Weight loss among our patients varied from 29 to 110 pounds. Eight of the patients had psychoses. Three of these were classified as schizophrenia, one as manic depressive psychosis, manic type, and one as paranoid condition. One patient had a delirium associated with cerebral malaria and 2 were considered to be psychotic because of nutritional deficiency. Although neurotic symptoms were present in most of the patients only 9 at the time of examination had sufficiently severe psychopathological reactions for a diagnosis of psychoneurosis to be made.

## PERSONALITY REACTIONS

During captivity most of the men were comparatively seclusive and taciturn. There

were few group activities although many small cliques were formed for companionship and for the purpose of obtaining and sharing food. Mock classes were commonly held in which someone would describe in detail the preparation of some especially delicious dish and many of the men carried cook books. General conversation dealt principally with food or war news. Sex was a topic for the first few months only and on the two or three occasions when packages of extra food were available. At such times overt homosexuality and masturbation were common. The latter gave rise to considerable guilt feelings and many attributed the mastitis to this practice. Otherwise, there was a marked decrease in sexual preoccupations. Very few had erections or nocturnal emissions and some even said they noted a decrease in the size of their genitalia. Testicular atrophy in undernourished men has been noted(15) and in partially starved women atrophy of vagina and uterus have been described with return to normal after a good state of nutrition was achieved(17). Although during the fighting interest in religion had been at an unusually high level, after captivity the men displayed in general neither increase nor decrease in their customary degree of religious drive. Ability to carry on was bolstered by maintaining a front of pride which gratified one's need for self-esteem and precluded showing base behavior or expressing emotion in front of the Japanese. In the cultural pattern of present-day western Europe and America, which molded the backgrounds of these individuals, men find a special need to assert their masculinity since they are placed in a position of being required to compete with women not only in the social and economic but even in the domestic sphere. This would naturally give rise to a pride in physical stamina and ability to "take it," and a display of imperturbability before their Japanese tormentors. Furthermore, these men were brought up in a society where racial groups whose skins are other than white are likely to be considered inferior. Thus, the necessity of servile submission to indignities at the hands of the Japanese provided an especially bitter experience. In dealing with this predicament the men could suppress evidences of suffering or dejection under torture but they could

not be defiant and still survive. As a result much of their resentment was directed toward their own superiors and associates where it could more safely lodge. Only the Americans gave verbal expression to it, however. Americans place a high value on "speaking one's mind" and refusal to be cowed by higher authority. Consequently, the American enlisted men generally spoke disparagingly of one another and particularly of the officers and their behavior. Among the British, on the other hand, who place a cultural value on euphemism and understatement we heard only praise for the ability of the officers to "carry on" and "play the game."

Although some of these prisoners sublimated their cravings by giving aid to their fellows, urging or forcing the depressed and exhausted ones to eat, there was, in general, a lowering of moral standards. Food was often obtained by devious means at the expense of other prisoners. Similar deterioration of moral standards has been described as occurring among the inmates of German concentration camps, some of whom even copied the behavior and values of the Gestapo guards (18, 19).

For the most part, the prisoners of the present study were confident that they would one day be liberated. After liberation most felt that they had had enough of the war and only 4 desired to return to fight the Japanese. Two of those who wanted to return to battle had psychopathic personalities.

Among the survivors 2 personality types seemed to predominate: (1) those with features of a psychopathic personality, and (2) personalities of the highest order of adjustment.

Eight of the 35 were placed in the first group. Four of these were the only patients who reached us in a reasonably good state of nutrition. In the group of patients considered to have unusually well integrated personalities the incidence of neurotic manifestations was nevertheless high. According to the medical officers among the prisoners, depression was common during the early months of captivity together with anxiety arising from uncertainty regarding the unpredictable actions of the Japanese. Later

on, however, among the survivors, anxiety and depression were not prominent, while hysterical suppression of resentments and conflicts with loss of function were frequently seen. Resentment was trouble some since severe punishments followed any display of hostility toward the Japanese. One officer said "I had to make a conscious effort not to resent things because I realized that my bones were brittle." Many were successful in making adverse situations less unpleasant by conscious or unconscious suppression of their feelings. Some eventually became unable to laugh or cry. The prisoner physicians who cared for the patients during captivity noted among them a shallow optimism out of keeping with their circumstances. Somatic sensations were suppressed as well as emotional feelings. Several survivors said that they were enabled better to withstand the tortures by learning to "turn off the pain." Some of them indicated that their deafness and visual impairment may have partially protected them from witnessing the tortures inflicted on their fellows. This repression of feeling was commonly followed by the development of conversion symptoms and close association with others seemed to stimulate their spread. One medical officer described an episode of mass hysteria at Bilibid which was characterized by widespread impairment of vision. Of the whole group of 35 at the time of examination 9 had clear cut manifestations of hysteria, chiefly anesthetics, deafness, restriction of visual fields and diminution of visual acuity. In most instances these abnormalities were readily dispelled under sodium amytal narcosis. The pattern of these disturbances was closely similar to that of the patients with structural defects due presumably to vitamin deficiency. In some the loss of function due to structural involvement was accentuated by the superimposed hysterical loss of function. Most of the prisoners experienced fairly frequent nightmares whose content often dealt with battle situations or tortures. Several continued to have nightmares for a year after repatriation.

Since the group studied, although picked at random from surviving prisoners of war was naturally selected by virtue of survival

it was of special interest to know the prevailing personality reaction among those who succumbed during captivity. The testimony of survivors is practically unanimous that prisoners who became depressed or allowed themselves to become agitated by thoughts of home developed distaste for food and died. Survival depended in a large measure on being able to eat anything that was available in the way of nutriment since the maximum was barely enough to sustain life. Here, then, was a special situation in which anorexia was a dangerous and possibly fatal symptom.

The reactions of one prisoner, who died of starvation shortly before his fellows were liberated, are expressed vividly in verses (20). The following is an excerpt from one of his poems called "Prison Camp Reverie":

The right or wrong we cannot judge or know,  
We only see that here a few must pay  
A bitter penance, living day to day  
And watching years unfold unused and slow.  
We only feel our hungers wax and wane  
To suit the whim that guides our captor's hate.  
We only feel the dream fade at the test  
The spirit quenched, the youth starved at the breast,  
The heart grown calloused and the once-proud head  
Bowed low beneath the captor's iron hand.  
We only know our candle gleam of hope  
Glow in a darkness where our minds must grope,  
Lost and forsaken, through a strange gray land.

The best adjusted individuals among the group helped themselves to survive by keeping busy and productive. This was especially possible for doctors and chaplains who could keep occupied practicing their own professions.

As an example of such a prisoner who apparently had a well integrated personality of a conscientious perfectionistic type and who made an adequate adjustment to his misfortune, the case of one of the medical officers is quoted.

The patient, an orthodox Jew in his early thirties, who had drifted away from formal religion, was born and educated in the middle west. He had always been tense and ambitious and worried a good deal about his ability to make good and about what others thought of him. He had been graduated from medical school for 2 years when he was drawn into the Army by virtue of his reserve commission and promptly sent to the Philippines. After the fall of Bataan, he was imprisoned in Camp O'Donnell, Cabanatuan and finally in Japan. At Camp O'Donnell he had dysentery and jaundice. His

weight decreased from 135 to 102 pounds. Despite malnutrition he got along better during captivity than he had anticipated. He worked hard to divert himself from discouraging thoughts. He forced himself to eat. He disliked rice but ate all he could obtain. He felt that being of relatively small stature was an advantage because it reduced his food requirement. "I bought protein with all the money I could get. I sold my shirt for it. I treated some Japs who had gonorrhea with argyrol and got extra food."

He felt that the experience had changed him from a tense, ambitious individual to one who would be contented just to get along. "These years are wasted. I should have been married. The world has slipped by. A dirty trick was played on me but with the end result I am pleased. I feel I have more courage and I am not as shy. I am more mature and I get points in books that I missed before. Now I won't be as nice to people I don't like."

*Comment.*—This doctor made one of the best adjustments in the group to his adverse circumstances although the experience changed him, temporarily at least, from a driving and relatively productive individual to a more passive, phlegmatic one. It is noteworthy that there is a slight paranoid coloring to his thinking. Most of the prisoners displayed this characteristic to a more marked degree and suspiciousness in their attitude toward others persisted after repatriation for the year during which they were followed. It is of special interest that their resentment is directed toward fellow Americans rather than the Japanese. After liberation some of the most ill-treated Americans offered cigarettes to their former guards and this doctor noted with surprise after a year back in the United States that he felt no hatred for the Japanese.

The frequently encountered combination of psychopathic personality with hysterical loss of function is illustrated by the following case:

The patient, a 24-year-old regular army soldier, served in an anti-aircraft unit. As a child he disliked his father whom he considered a drunkard, and therefore ran away from home at the age of 9 and hitch-hiked all over the United States, living from time to time with families of chance acquaintance. In many places he went to school and managed to complete the twelfth grade. He was denied his diploma, however, because shortly before graduation he threw the teacher bodily out of the study hall. He drank heavily at irregular intervals and was many times jailed for disturbing the peace. He worked at a large variety of odd jobs including bootlegging, the peddling of narcotics and farming.

At one time he owned a large number of cattle which he boarded at various ranches throughout the West. He never married but lived with a large number of girls for several months at a time. He took great pride in his physique and personal appearance and considered himself the best dressed man in the United States. He enlisted in the Army to become an anti-aircraft gunner because of his interest in shooting. Often he amused himself reclining on an isolated mountain ridge shooting with a rifle at low flying commercial passenger planes. He enjoyed seeing chips of metal fly off the plane. He never formed deep emotional attachments. He says, however, that there had been in his life one girl whom he really loved. He realized however, that her love for him could not last because of his personal peculiarities, so in order to kill her love he had intercourse with another girl before her eyes.

After enlisting in the regular Army in December 1940 he continued to be impulsive and was court-martialled several times for fighting. He remained a private until during the last days of the fighting at Bataan when he was promoted to sergeant for taking charge of an ammunition dump, a responsibility which others had refused because the dump was exposed to constant bombing and strafing by the Japanese. After the surrender he ingratiated himself with one of the Japanese officers and became his chauffeur until he tired of the job and escaped to the hills. He eluded the Japs for several weeks but his proclivity for attending the convivial festivals of the natives led to his recapture. One evening in a drunken stupor he was trussed up and turned in to the Japanese by one of his native comrades. During captivity he was beaten more than most of the prisoners because of his insubordination. He consciously suppressed his feeling for pain and was eventually able to withstand the beatings without any sensations whatever and soon he had lost all feeling, but he began to have episodes in which he relived the tortures inflicted on him. These hallucinatory episodes usually occurred during the day while he was awake and resting. He was at these times able to see and hear his tormentors and feel the pains which had been inflicted on him a day or two earlier. To these experiences he reacted volubly, crying and shouting and writhing in pain.

Eventually, in September 1944, he was placed on the closed psychiatric ward. He wrote no letters during his imprisonment. He did not worry about survival since he knew that he would live to see the Americans liberate the Philippines but he was equally certain that he would die before he reached the United States. He said that the experience had made him lose interest in everything except to see his mother once again. "I don't care about anything, but I don't want to kill myself because that is cowardly."

The patient stated that he had wet and dry beriberi, diphtheria, malaria, scurvy, pellagra and tropical ulcers. He said that he was unable to do duty for 3 months of captivity because of total blindness. He also claimed to be deaf but often answered questions which were put to him in a very quiet voice. A few days after release he attempted inter-

course with a Filipina. For a time he regained his sense of feeling in the genital region but he had no ejaculation and the ability to feel disappeared again.

Detailed examination at the 9th General Hospital failed to reveal any abnormal neurological findings except for a complete insensitivity to all sensations except on the cornea. Not only the corneal, however, but the superficial abdominal reflexes were brisk. He maintained an apathetic listless attitude with a blank facial expression, showing only irritation and anger when the strategy of the Pacific campaign was discussed.

Following intravenous injection of 0.5 gram of sodium amytal he said that he felt himself growing larger and larger. He discussed freely his ability to turn his sensations on and off at will and he boasted about his having been known as "Terrible Ted" in the past. There was no improvement in skin sensation under sodium amytal nor was there any improvement in generalized constriction of visual field; and large central scotomata which had been found on ophthalmological examination. Visual acuity was 20/70 in the right eye and 20/200 in the left. His ability to see as well as this was considered to be incompatible with the presence of large central scotomata.

*Comment.*—This patient obviously had a severely psychopathic personality and he apparently had a marked superimposed hysterical reaction. The curious experiences he had in which he relived the tortures inflicted upon him, his conviction that he would never reach the United States alive, together with the widespread character of his anesthetics suggested that he might be psychotic. He did reach the United States, was discharged from the service and was still resting when he answered the questionnaire sent to him after a year of repatriation. He felt that his status had not changed significantly except that he had regained his sexual drive.

Illustrative of the subjects who displayed the structural changes of nutritional deficiency with an overlying hysterical defect the case of a 35-year-old private in the Dutch Army is quoted.

This patient was born in Java. He always had strong desire for learning but had to drop out of elementary school because his father did not approve of elaborate education. Later, when his parents were divorced, he returned to school. He finally graduated from college as an agricultural engineer at 27. He married and had two children at the outbreak of the war. He was captured as part of the rear guard defending Surabaja. He became separated from his family but believed that they were interned in Java. He was taken to Singapore and later to Thailand where he worked on a rail-

road. He embarked for Japan in May 1944 but was put ashore at Manila and sent to Bilibid because of illness.

During captivity he tried not to think of his past or future life or his domestic affairs. Instead he tried to keep intellectually occupied by solving problems in physics and mathematics during his non-working hours. During the last year of captivity he noted difficulty in thinking and recall. He finally was unable to sustain any intellectual effort. He felt at first that he underwent no personality change but after 2 months of freedom he recognized that he had become blunted in his feelings and after his experiences became more remote he felt a gradual improvement in his depth of emotional reaction.

In Thailand he was healthy for the most part, except for recurrent attacks of bacillary and amebic dysentery. When he was stuffed in the hold of a ship on his way to Japan he became ill with "dry beri-beri" manifested mainly by generalized weakness. After arrival at Bilibid the patient noted anorexia, weakness of the jaw, loss of feeling in the lower half of the face and in the hands and legs. He was also extremely night-blind. He felt that these symptoms improved with vitamins.

On admission to the 9th General Hospital, the patient appeared moderately emaciated. There was ascites and ankle edema. Neurological abnormalities included weakness in the anterior tibial muscles. The knee, ankle and plantar reflexes were absent. He showed a diminution in all types of sensation in the legs below the knees and in the hands. Vision, O.D. 20/200, correctible with minus 1.25 lens to 20/20. O.S. 20/100, correctible with minus 2.00 lens to 20/20. Fundi and fields were normal. Despite these findings, the patient stated that he was unable to see small print even when it was held close to his eyes. Laboratory data obtained included normal urine and negative blood Kahn, RBC 3.5, Hb 85%. Performance on the Herring revision of the Binet-Simon intelligence tests was spotty, with defects predominantly in tests of memory, retention and reasoning. Mental age 14 years, 8 months, intelligence quotient 91.

*Comment.*—It appears that part of this patient's pattern of disability was hysterical. This is particularly likely with regard to his transitory blindness, weakness of the jaw, and loss of feeling in the lower half of his face. In the hospital his inability to read print close up was not consistent with results of other tests of acuity. He had during captivity resorted to emotional suppression consciously when he substituted mathematical problems for thoughts of home. In addition to hysteria, however, he was clearly suffering from a neuropathy probably due to avitaminosis. Whether or not his loss of intellectual function was part of the picture of hysteria or of avitaminosis cannot be said,

but showing as it did a predominate defect in recent memory and retention, it is compatible with the pattern of organic brain involvement.

The case of a 43-year-old lieutenant colonel of the General Staff Corps is cited to illustrate a pattern of psychosis.

Little information was available about his early life except that he was ambitious and vain but had very little money. He graduated from West Point, was very active socially and found great difficulty in getting along on the salary of a second lieutenant. He finally married. He was interested in dancing and was an expert rider and fencer. His only child was a boy in his teens. One soldier who had served under the patient in 1937 when the latter was a captain, considered him a brilliant man of versatile interests and an excellent leader who was loyal to his men.

After the surrender, the patient was at first outraged by the failure of the Japanese to recognize his importance. Being a member of the General's staff, he was surprised not to have been transferred to Japan with the full colonels and general officers. He wrote several letters to the Japanese authorities stating that he should receive special consideration. He was imperious in his dealings with fellow American officers and managed to get by without doing any work. When his immunity from labor assignments seemed doubtful, he reported on sick call. He talked a great deal about his early life, of his accomplishments and particularly of his son. He complained that the army did not pay him enough to support his family properly. After transfer to the psychiatric service at Bilibid in April 1944, he was restless, overactive and overtalkative. He continued to emphasize his importance and contended that he was being mistreated. At intervals, he had periods of excitement in which he would shout and struggle all night. He was skeptical and suspicious of everyone and talked to himself a great deal. He was constantly involved in financial dealings, usually concerning tobacco. He managed to leave one Jewish patient with a handful of useless I.O.U.'s. He felt convinced that he would die from beatings or from the "poisoned" medications administered him in the hospital. He repeatedly demanded to have his finger prints recorded and sent to his wife so that she would not have to wait 7 years for his benefits in the event of his death. One day he escaped and hid under a bed in another ward. He required a great deal of sedation during his hospital stay.

He had several attacks of malaria but apparently no other illnesses except malnutrition and psychosis.

On admission to the 9th General Hospital, the patient was markedly emaciated, disturbed and intensely paranoid. He repeatedly stated that the Japanese had treated him much better than the Americans, and he was particularly bitter against the American doctors and corpsmen in Bilibid. He stated that at the time of surrender the morale of the American troops was very poor but that they

were humanely treated by the Japanese. He said that he had been accused of being a "Nip lover" because he gave his watch to a Japanese doctor who had saved the lives of many American victims of malaria. He blamed the war on munition makers and said that the American officers had been "sold down the river." He said that he had tried to commit suicide twice by swallowing cigarette butts because he knew he was going to die and did not want to tell any secrets. He asked to have his finger prints recorded and said that he would have the personnel of this hospital punished if they refused to comply with his request.

Apart from his emaciation and absence of all deep tendon jerks, there were no physical abnormalities. Sensory examination could not be properly evaluated owing to the patient's paranoid attitude and poor cooperation.

*Comment.*—This patient was a vain, narcissistic individual who required servitude and adulation from others for a satisfactory emotional adjustment. His personality structure broke down under the indignities and humiliation of captivity. His frequent vain attempts to bolster feelings of security by imperious behavior only got him into difficulty with his associates. The pattern of his psychotic reaction was predominantly that of a paranoid condition with marked deficiency in insight and judgment but without much disorganization. Without the care and protection of the hospital it is unlikely that this patient could have survived. A year after his return to the United States he had apparently recovered from his psychosis but retained a suspicious attitude.

The case of the only female in the group studied is quoted. In general the experience of the women was far less gruelling than that of the men.

The patient was the wife of an army officer several years older than herself. She loved the pomp and the gay social life of the army posts. She was sentimental and dramatic and spoke of the American flag as "Old Glory." She was humiliated and depressed by the surrender, but was particularly proud of the fact of having never shed a tear in front of a Japanese. At Santo Tomas, although the nurses were isolated, crowded and underfed, they were supplied with good literature and allowed to take courses at the university. There was a strict regulation against the keeping of diaries or writings of any type under pain of execution. Despite this, the patient wrote a book on the faulty defense of the Philippines on tiny bits of paper which she hid in scattered obscure places about the building.

She got a few letters from her husband, a lieutenant colonel, who was sent to Japan after his capture. He wrote, requesting warm clothes and

sweaters. "I cried for a week after I got that. Of course he couldn't know how we were being treated, how impossible it was for me to get anything for myself or him." She wrote her husband as often as she was allowed to and to her mother but she received no letters from the latter and gradually became convinced that her mother was dead.

During captivity she missed kindness and tenderness more than anything and missed the courtly attention of others. After liberation she was unduly pleased by being told that she looked well and pretty. She was very careful of her appearance but needed a great deal of encouragement. At times, she would cling to her companion and say "You mustn't leave me now. I cannot bear to be alone." She was apprehensive about returning to the States, feeling that there was nothing to go back to since she was convinced her mother was dead. She was very concerned about how she and the other nurses would be received in the United States. After arrival in this country she was pleased with the attentions of important people and reporters but was annoyed by the boorish manners of the souvenir hunters who tried to tear off her buttons and cut locks of hair.

At the 9th General Hospital it was noted that her legs were wasted with slight weakness of the anterior tibial muscle groups, bilaterally, absent knee and ankle jerks and decreased sensory perception for cotton and pin over the lower legs. Mental examination was not remarkable.

She felt that she had matured during captivity having learned more of human nature and that she had become more serious minded. Her intellectual faculties seemed improved in view of the studies carried on at the university and after return to the States she arranged to take further courses at Columbia. At home she found her mother alive and well and was shortly reunited with her husband.

*Comment.*—This patient, a comparatively superficial individual with apparently few resources before the war made an excellent adjustment during captivity and turned the experience to advantage.

#### ADJUSTMENT AFTER RETURN HOME

Most of the prisoners who answered inquiries 6 and 12 months after repatriation commented not only on their own symptoms feelings and attitudes but on those prevailing among the other repatriated prisoners of war with whom they were in touch. All regained their former weight very quickly and with this their normal sexual interest and function. Prominent among physical complaints were burning pains in the legs and less frequently persistent swelling of the ankles. Other observers have noted symptoms of polyneuritis arising in previously



starved subjects during the period of return to normal weight (21). Several complained of persistent fatigability, exertional dyspnoea, palpitation, continuing difficulty in thinking and defects in recent memory. The finding of optic atrophy with failure of the restricted visual fields to improve was confirmed in 2 patients after a year at home. Restlessness and increased irritability, alarm reactions and nightmares were generally experienced, together with resentment against striking laborers. Several felt that they had lost more ground than they could make up in the highly competitive atmosphere of the United States and expressed a desire to return to the Orient. Many drank a good deal for a few months after return to the United States but none became alcoholic.

The most striking mental reactions were the persistence of the paranoid attitude and the shallow optimism so generally displayed during captivity. All subjects who answered the questionnaires stated that they had become less trusting of their fellows than before and although some of their hysterical emotional detachment was replaced by anxiety, most reported increased optimism out of keeping with their handicaps and difficulties of adjustment. In general the adaptation to repatriated life was less satisfactory among these prisoners than they had anticipated.

#### GENERAL COMMENT

The prevailing patterns of behavior and personality reactions among this group were similar in some ways to those reported by observers of prisoners in World War I; but in other respects there was a sharp difference. Difficulty in concentration, loss of memory and apathy with progressive decline in sexual interest and paranoid attitude were common to both groups; but, while despondency and depression were leading features of the reactions of allied prisoners in German camps during World War I and hysteria was rarely recognized, among the allied prisoners of the Japanese in World War II depression was common only during the early phase of captivity, later being replaced by a sort of dull euphoria. Among the survivors, depressive trends were scarcely noted while hysterical features were general.

It seems possible that this discrepancy may be due to the difference in the treatment of the prisoners by their captors. During World War I the allied prisoners of the Germans were handled harshly but far more humanely than were those who were unfortunate enough to be held by the Japanese in the recent war. By the same token, their outlook for survival and eventual repatriation was far more favorable. Furthermore, in Europe there were encouraging possibilities of escape while successful escape from the Japanese in the Philippines was an extremely remote possibility. This greater stress, then, may have necessitated further suppression of feelings than the apathy noted by the earlier authors and the development of an attitude which precluded depression and its accompanying ominous inability to eat.

The personality changes noted in this study may illuminate some of the mechanisms responsible for the development of hysteria in general. There appeared to be a stepwise progression during the adjustment of these individuals. At first anxiety and depression were experienced. Later they were consciously and unconsciously suppressed and finally there followed the development of conversion symptoms. A similar chain of circumstances applied to somatic sensations which were first ignored and ultimately repressed. The hysterical conversion symptoms which these patients displayed involved in most cases the organs which in that individual, or in others about him, were damaged by trauma, infections or nutritional difficulty. This same pattern of determination of the site of hysterical loss of function was generally seen among soldiers in the Pacific who were not prisoners but who were wounded or disabled from one cause or another (22).

#### SUMMARY

Certain special features of the circumstances surrounding a group of Allied prisoners of war held for 3 years by the Japanese were so stern and sufficiently unusual as to warrant detailed study of the patterns of reaction of several individuals. Similarities which recurred frequently were found. Nearly all the men had been ill with dysen-

tery, beri-beri or other diseases from time to time. Most displayed difficulty in thinking, repression of anxiety with development of conversion phenomena, loss of sexual desire and obsessive preoccupation with food. Paranoid rationalization was also commonly displayed and appeared to be a device for avoiding responsibility in the overwhelmingly adverse situation in which these individuals found themselves. Although these symptoms are not ordinarily encountered in healthy individuals in normal surroundings, they were so universal in this group that they might be considered normal reactions under the circumstances. When the environment became more favorable these disturbances improved dramatically although incompletely.

Among the psychotic reactions there was observed no set pattern although paranoid trends were common to all types. The psychotics were the only patients in the group studied who showed significant depressive trends. It appears that the special circumstance of being hospitalized and thus protected from many of the stresses enabled the psychotic patients to survive.

The unusually high incidence in the group of survivors of those with psychopathic personality may indicate that in the original group psychopathy was common. It may, however, be because psychopathic characteristics were an aid to survival in this special situation. These individuals were emotionally blunted and lacked the restraints of conscience. Therefore, they were able to seize every opportunity to satisfy their own personal needs without consideration for the group as a whole. Furthermore, their shallowness of affect may have protected them from sustained depression or anxiety with associated anorexia which proved fatal to other prisoners.

The hysterical conversion features common to many of the group had similar survival value in that they, too, often replaced anxiety and depression. It is of special interest that the mechanism of emotional suppression which often ended in some degree of hysterical loss of function was commonly invoked by those in our group who were considered to have generally well integrated and non-neurotic personalities. It indicates the

truth of the old cliché that everyone has a breaking point given an adverse situation of sufficient magnitude. It further accents the economy of hysterical emotional detachment and suppression.

In general, it appears that the experience had a comparatively long lasting handicapping effect on the personality adjustments of even the best integrated of these individuals. Among those heard from after a year of repatriation, although some were functioning adequately in productive capacities, few were completely well and happy and effectively engaged in a suitable job. Evaluation of the end result must await the passage of more time.

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## THE ELECTROENCEPHALOGRAM IN MALADJUSTED CHILDREN

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Three years ago we embarked upon a study which, owing to wartime conditions, has not been reported. We have now been able to extend our observations and to review our results in the light of more recent knowledge. The purpose of this paper is to seek a correlation between the psychiatric condition and encephalographic abnormality of maladjusted children.

We took the first 50 cases available at Jordanburn Nerve Hospital at the time of the study; ages ranged from five years and five months to fifteen years. Of these cases 16 were diagnosed as psychopaths of the aggressive type, 8 as psychopaths of the inadequate type, 7 as obsessional states, 5 as anxiety states, 13 as reactive depressions and 1 as a schizoid personality. They represented the usual range of symptomatology, having been referred for incontinence of urine, for difficulties of speech, emotion or movement, for fears or nocturnal disturbances, failure at school or generally, truancy, vagrancy, peculiar habits, theft or other criminal tendencies. Three of the aggressive psychopaths, 2 of the anxiety states and 2 of the depressions were also high grade mental defectives. Of the total 50, 6 had a history of "turns," 15 of enuresis, 8 of requiring resuscitation after a difficult birth and 10 of mild concussion or meningitis.

Further, we examined 46 normally adjusted children from two schools representing the working class and the upper and lower middle classes from which our patients came. Their ages ranged from five to fourteen inclusive, their home life was harmonious, their adjustment to each stage in life had been normal and their performance was average at school, although 1 or 2 highly intelligent children were included. No mentally dull child was examined in this category, and 2 with broken homes were replaced by 2 other children with normal en-

vironments. Both normal and abnormal children were examined psychiatrically, complete personal and family histories being obtained at the same time by the psychiatrist. They were then sent to ward 20, Royal Infirmary, Edinburgh, where the electrical records were made.

The electroencephalographic equipment consisted of a three-channel Ediswan-Walter apparatus using cathode-ray oscillographs. Four electrodes were spaced out longitudinally down each hemisphere in turn (with 6-7 cm. between neighboring electrodes) and the three channels connected to these in a "bipolar" manner. The subject lay on a comfortable trolley with the head turned first to one side and then to the other. A visual examination lasting several minutes was made of each hemisphere and short records photographed, the subject being asked to open and close the eyes several times during the examination. Every attempt was made to see that the children were contented and the majority of them quite enjoyed the examination.

The results obtained on normal children show considerable variability. At the upper end of the range (age 12-15) the activity was almost entirely 8-10 per second waves showing the usual response to closure of the eyes (the "alpha" rhythm). This alpha activity in normal children is variable in size from one case to another, as in adults, but in children it is often very much less regular than in the adult, and there are at times single large waves or a burst of large waves very sudden in onset, giving a spiky and irregular appearance to the record. In the younger children (5-8 years of age) there are occasional 4 per second and other slow waves often mixed with faster frequencies and reaching a size of over 100  $\mu$ V. It is clear that the standard of normality of the EEG must vary very considerably with age, so that a very large number of normal children is needed before adequate standard can be set up. Our own series is quite insufficient for this. To supplement our result

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some attention was given to the results of Gibbs and Gibbs (1941), Lindsley (1936) and Brill and Seidemann (1941), but of course, in comparing the results of different workers the varied electrode-placements used must be considered.

The EEGs of the normal children were taken as a standard of normality with which the records of the maladjusted were compared. The records were then scrutinized and the psychiatric data tabularized under the main headings—psychiatric stigmata in father and mother and their collaterals, stigmata in siblings, endogenous factors (birth injury, cerebral damage, 'life-long history'), personality, symptomatology, treatment and response to treatment. The two halves of the work were compared. As our numbers were small only positive results are recorded.

The psychiatric groups 'aggressive' and 'inadequate' showed an average family loading of 7 stigmata per case, 11 main symptoms per case of which 4 were aggressive in type. The 'obsessional,' 'anxiety' and 'depressive' groups showed features so similar that we were able to take the average for all three groups. The family loading averaged 4.2 stigmata per case, the symptomatology 7 per case of which 1.7 were aggressive characteristics. Six of the psychopaths had required resuscitation at birth and 3 had had mild concussion.

One case only had definite electroencephalographic abnormality. This 13-year-old lad was subject to outbursts of violence in which he would be destructive to persons and property and which alternated with periods of sullen moroseness in which he would become solitary. His history of difficulty was life-long, but he had had a mild concussion at the age of 4 years. He was not the worst of the psychopathic personalities. Seven other cases showed a doubtful abnormality of the EEG, 4 being aggressive psychopaths, 2 inadequate psychopaths and 1 case an obsessional. There had been much debate about the diagnosis of the last case, for whereas her symptomatology had blossomed into a true obsessional neurosis, it was obvious from her history that she had always been a severely defective personality. She also suffered from Pink's disease in infancy. One child in the doubtful abnormal category had an intel-

lectual defect, 1 had a history of petit mal attacks, 1 had a difficult birth and another a history of possible organic complication.

In our series there is little encephalographic abnormality, only 1 case in the 50 being definite. Seven other cases do not correspond exactly to normality, but as our experience with normal children is limited, we should not classify these among the abnormals. If however we analyze these 8 cases, we can find no other common bond beyond their inclusion in the psychopathic groups, and this distinction they share with 17 other cases which had normal EEGs. Symptomatically there was no correlation whatever; only 2 were enuretic whereas 13 other enuretics had normal EEGs; the amount of aggression shown varied in each case, and even the response to treatment varied—1 recovered, 2 recovered and relapsed, 3 remained too impaired to stay in the normal community and 1 grew worse. These cases could be compared with the rest of the psychopathic groups and contrasted with the other groups, but they did not constitute a class of their own.

It appears therefore from our findings that the EEG and the psychiatric pattern in the child are not correlated, that symptomatically there is no connection whatever, and that we are not able to use the EEG prognostically in the maladjusted child. It would appear that psychiatrically a cerebral dysrhythmia should be regarded as one of the stigmata which may or may not occur in psychiatric children, and in this way it is similar to syndactyly, congenital heart lesions, left-handedness, undescended testicle, etc. It is appreciated that in a defective more than one abnormality may be found, and it is significant that the 1 truly abnormal and the 7 possible abnormal EEGs were found in the psychopathic or defective personality groups where the hereditary loading was heaviest, the symptomatology much richer, and where other defects were found.

Other workers have shown a higher percentage of abnormality, but this may be due to difference in sampling. Jasper, Solomon and Bradley in their series of behavior problem children found more abnormality than we in our series, but they showed that there existed a closer relation between

electroencephalographic abnormality and *neurological* findings than between the dysrhythmia and behavior disorder. We know that there is a direct relation between dysrhythmia and certain lesions in the brain, *e.g.*, occlusion of the carotid arteries, tumor, abscess, etc., but such lesions do not necessarily produce psychopathy. In support of this conclusion it is known that the details of the normal EEG do not relate in any way to the personality of the subject. It appears from these observations and our findings, that the encephalogram is evidence of some physical state which has no direct bearing on a psychiatric condition, but which may occur as a defective stigma in children with psychiatric conditions more especially of the defective type.

#### SUMMARY

We investigated the EEGs of 46 normal and 50 maladjusted children and found no correlation between encephalogram and psychiatric condition.

Our thanks are due to Professor D. K. Henderson and Mr. Norman Dott for their help and the facilities of their departments, to the Head Master of North Merchiston School and the Head Mistress of James Gillespie's Girls' School for their intelligent selection of normal children, and to the Edinburgh Education Department for co-operation in this study.

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## FURTHER STUDIES ON SHORT COURSES OF ELECTRIC SHOCK TREATMENTS

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Since the first publication on "The Question of Shorter Courses of Electroshock Therapies in the Depressions" by Savitsky and Tarachow(10), additional data have been collected.

The treatments were all given extramurally in the office of one of the authors. The Lektra machine was used in every instance. Two treatments were given per week. The voltage varied from 120 to 160, and the time was 0.2 second. Two rapidly successive stimulations were given in almost every instance. This report includes 34 of 100 patients who recovered with 5 or less treatments. Nine were males and 25 females. Thirty of these (88.2%) were suffering with depressed phase of manic-depressive psychosis; 3 (8.8%) had involutional melancholia, and in one (3%) the diagnosis was schizophrenia. The periods of recovery after these short series varied from 11 months to 28 months with an average of  $15\frac{1}{2}$  months. These psychotic episodes lasted for periods ranging from 3 weeks to 3 years. One patient had been depressed for 2 years, and the schizophrenic had had paranoid ideas for 3 years. There seems to be no clear relation between the duration of illness and the number of treatments needed to bring on a remission.

A few of the 12 patients reported by Savitsky and Tarachow in 1945 were followed. A 35-year-old man with a depression of 7 months' duration, and who cleared up with 4 electric shock treatments, has remained well for  $3\frac{3}{4}$  years after the last treatment. Another patient, a 40-year-old man with a depression of 7 months' duration, who responded to 4 electric shock treatments, has continued to be well for 36 months after the last treatment. A 44-year-old woman with a depressive episode of 3 months' duration, who cleared up with 5 electric shock treatments, is reported to be well after 3 years and 3 months. A 47-year-old woman with a depression of 9 months' duration, who re-

covered after 3 treatments, is well for 3 years and 3 months after her last treatment. The observation mentioned in Savitsky and Tarachow's paper, that the presence of neurotic symptoms during the psychotic episode renders the illness more refractory to electroshock therapy, has not been confirmed by further study.

Recurrence of episodes of depression has been observed in 2 of the 12 previously reported patients. One of these returned for another course; this recurrent depression cleared up after 5 treatments. He has remained well for one year after this last series of treatments.

Of the 34 patients in this series who were given 5 or fewer treatments, 16% had had relapses. Of the 66 who had more than 5 treatments, 22.8% relapsed. Some of the patients who were given longer courses of electric shock treatments even showed unusually frequent relapses with significant shortening of the periods of remission.

There seems to be justification as already indicated by Sands and Sargant(9) for giving as few electric shock treatments as is necessary to bring on a remission. Kleinschmidt(2) and Sands and Sargant have already emphasized the necessity for individualizing the amount of treatment for each patient, avoiding any "rule of the thumb method." There is no proof that giving more treatments causes a more protracted remission.

Since the publication of the first paper on shorter courses of electric shock treatments, the tendency to shorten the course of treatments has become more widespread. The emphasis, however, in the literature is still on the inadequacy of shorter courses (Kalinowsky, Bennett, Gralnick, and others). Norman and Shea(7) in 1945 reported that the average number of treatments for involutional melancholia was 15 and for manic syndrome of manic-depressive psychosis 20.

Mueller(5) reported remissions in manic-

depressive psychosis with 4 to 6 electric shock treatments. Smith(12) and his associates stated that recurrences are not prevented by giving additional electric shock treatments. Malzberg(4) in his statistical analysis of New York state hospital data concluded that courses of less than 15 convulsions in schizophrenics gave higher rates of recovery than did longer courses. Lowinger and Huddleston(3) found that, in schizophrenics who were ill more than 6 months, courses of 16 to 20 grand mals yielded no better remission rates than courses of 10 to 15. In patients whose illness was of more than 6 months' duration, better remissions were obtained with 10 to 15 grand mals than with more treatments. Wolfe(13) stated that depressions take as few as 3 treatments. Senseman's(11) average number of treatments per patient in his series of 30 cases was 4.1, ranging from 2 to 11. He noted a depressive who cleared up after 3 treatments. Myerson(6) reported that 4 patients with borderline psychoses who did not respond to other forms of therapy, including long periods of psychotherapy, benefited markedly after 3 to 5 electric shock treatments.

Reynolds(8) admits that improvement may begin almost right after the first treatment and proceed to a point where a patient may be nearly symptom-free after 5 or 6 treatments. However, he warns not to stop treatment at this point because relapses occur within a week or two. He advises to continue treating the patient even if symptom-free. Wolfe adds that he usually likes to throw in 2 or 3 extra treatments. We do not agree at all with this point of view. Bagchi, Howell, and Schmale(1), in clinical and electroencephalographic studies of electric shock treatments, found no significant relationship between the number of treatments and the results obtained.

A few case histories may clarify the problem:

CASE 1.—A 40-year-old married woman was depressed for 4 months. The family history was negative. There were no previous attacks of depression. There was, however, a long history of compulsive tendencies. The examination showed dejection, retardation, insomnia, loss of interest, obsessive thinking, and self-derogatory notions. She was given 4 electric shock treatments, all grand mal

seizures. Improvement was evident after the second treatment, with a complete remission after the fourth. Twenty-one months later, she was perfectly well, with no depression. She denied compulsions.

CASE 2.—A 44-year-old married man was depressed for 4 months. He had a previous attack of depression 8 years before. There was no history of hypochondriasis or of neurotic symptom formation between attacks. This last episode began with an intense fear of a stroke. He soon became agitated and depressed with loss of interest, insomnia, and inability to work. Hypochondriasis became intense. He was given 4 electric shock treatments, all grand mal seizures. Improvement was noted after the first treatment, and he appeared completely well after the fourth. He was seen about 28 months after the last treatment; he appeared completely well.

CASE 3.—A 37-year-old married woman who was depressed for 4 months had had one previous attack that required institutionalization. Between attacks patient was completely normal. She was dejected, lost interest in everything, could not sleep or eat, and was utterly unable to do her housework. She was given 2 electric shock treatments, both grand mal seizures. There was no change after the first treatment; she seemed completely well after the second. She remained well for 9 months and recently had a relapse.

CASE 4.—A 52-year-old man was depressed for 3 months. There was a long history of at least 10 years of schizoid behavior with occasional definitely paranoid tendencies. He had had many attacks of depression and manic behavior. One of these attacks lasted almost 2 years. The other lasted 4 to 8 months. On examination he appeared depressed, retarded, and extremely self-derogatory; he could not sleep, lost his appetite, was unable to work, and lost interest in everything. He was given 1 electric shock treatment and appeared well after it. He remained well for 1 year following this treatment.

#### SUMMARY

Thirty-four additional patients with diagnoses of manic-depressive psychosis, involutional melancholia, and schizophrenia were treated with 5 or fewer electric shock treatments. All the patients had complete remissions for periods up to 28 months. Some patients previously reported, who had been given 5 or fewer treatments, were followed up and were found to have remained well up to 3 $\frac{3}{4}$  years after the last treatment.

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# REPORTS OF MEETINGS OF THE COUNCIL

## THE AMERICAN PSYCHIATRIC ASSOCIATION

### NEW YORK CITY

MAY 17-23, 1947

MAY 17, 1947

A meeting of the Council of The American Psychiatric Association was called to order by the President, Dr. Samuel W. Hamilton, at 2.00 p.m. Those present:

Officers: Dr. Hamilton, President; Dr. Overholser, President-Elect; Dr. Bartemeier, Secretary-Treasurer.

Councillors: Drs. Bowman, Cathcart, Gayle, W. C. Menninger, Moersch, Ratliff, Rennie, Ruggles, Strecker, G. A. Young, and former President, J. K. Hall.

Auditor: Dr. Hamill.

Executive Assistant, Mr. Davies.

Chairmen of committees: Drs. E. D. Bond, Burlingame, R. M. Chambers, R. McC. Chapman, T. M. French, Heldt, Kenworthy, F. W. Parsons, P. L. Schroeder, Tarumianz, Thom, Tiebout, and Zilboorg.

Representatives of affiliate societies: Drs. Billings (Colorado), Colomb (New Orleans), Dexter (New England), Maeder (Pennsylvania), Moloney (Michigan), Robie (New Jersey), and Suitt and Young (North Carolina).

The Council received the report of the meeting of the Executive Committee held Apr. 22, 1947, which was read by the Secretary.

Dr. Bartemeier presented the report of the Treasurer for the period, Apr. 1, 1946-Mar. 31, 1947, and upon motion by Dr. Ruggles, seconded by Dr. Gayle, the report was accepted.

President Hamilton read letters from Dr. Edgar C. Yerberry and Dr. Zigmond M. Lebensohn, delegates to the Committee on Science Foundation Legislation, which held its first meeting in Washington, D. C., Feb. 23, 1947.

Dr. Hamilton announced that the delegates to the National Conference on UNESCO in Philadelphia, Mar. 24-26, were Dr. George H. Stevenson, Dr. Edward A. Strecker, and Dr. Lauren Smith.

Dr. Hamilton also read a report from Dr. Baldwin L. Keyes, Dr. James P. Sands, and Dr. George E. Peatick, delegates to the 51st annual meeting of The American Academy of Political and Social Science in Philadelphia, Apr. 18 and 19.

Dr. Bartemeier read a report of the estimated budget for the Association for 1947-1948, and Dr. Ralph C. Hamill spoke for the need of a Finance Committee composed of members who live in or near New York City so that they might

function effectively in studying the financial affairs of the Association.

The Council received the report of the Executive Assistant, Mr. Austin M. Davies.

Upon motion by Dr. W. C. Menninger, seconded by Dr. Ruggles, the Council voted to accept the recommendation of the Executive Committee that a Budget Committee be appointed.

The Council voted to accept the recommendation of the Executive Committee that one dollar from the dues of each member of the Association be allocated to the JOURNAL.

Upon motion by Dr. Strecker, seconded by Dr. Ruggles, the Council voted that Dr. Karl M. Bowman act as a committee of one to discuss the status of our colleagues who work in the institutions for the mentally deficient with our representatives on The American Board of Neurology and Psychiatry.

After considerable discussion, the Council voted on motion by Dr. Bowman, seconded by Dr. Ratliff, that further consideration of the budget be deferred until after the meeting of the membership as a Committee of the Whole on May 22, 1947.

Dr. Marion Kenworthy read the report of the Committee on Psychiatric Social Service and upon motion by Dr. Strecker, seconded by Dr. Ruggles, the Council accepted and approved the report.

Dr. Frederick W. Parsons presented the report of the Committee on Arrangements, which was approved by unanimous consent of the Council.

On motion by Dr. Bowman, seconded by Dr. Ruggles, the Council voted to refer the question of membership in the Social Science Research Council to the Executive Committee for a report.

On motion by Dr. Bartemeier, seconded by Dr. Ratliff, the Council voted that Dr. C. Charles Burlingame be delegated to represent the Association at the meeting of the Royal Medico-Psychological Association at no expense to this Association.

The Council voted, on motion by Dr. Ruggles, seconded by Dr. Ratliff, that the Association pay \$75.00 to The American Registry of Pathology.

Dr. Ratliff moved, and Dr. Cathcart seconded the motion, that the application of The New York Society for Clinical Psychiatry be referred to the Executive Committee with power to act. The motion was passed.

Dr. Bowman moved, and Dr. W. C. Menninger seconded the motion, that the Council authorize the setting up of a Section on The Private Practice of Psychiatry. This motion was passed.

Dr. Thomas M. French presented the report of

the Committee on Research and on motion by Dr. Strecker, which was seconded by Dr. Ratliff, the report was accepted.

President Hamilton read a letter from Dr. Paul H. Brauer and, after some discussion, Dr. Overholser made a motion which was seconded by Dr. Menninger that the letter be referred to the Committee on Standards and Policies. The motion was passed.

On motion by Dr. Bowman, seconded by Dr. Overholser, the Council voted to approve the action of the Executive Committee in passing a resolution that the Thursday morning session be considered as a meeting of the Committee of the Whole.

The meeting recessed at 6.00 p.m. and reconvened at 8.30 p.m.

President Hamilton called upon Dr. Zilboorg who presented the report of the Committee on the History of Psychiatry. On motion by Dr. Strecker, seconded by Dr. Bowman, the Council voted to accept and approve the report of the Committee. After some discussion, the Council voted, on motion by Dr. Bowman, seconded by Dr. Strecker, to approve the re-issue of the centenary volume in a cheaper edition by ways and means to be approved by the Council on the recommendation of the Committee on the History of Psychiatry. In this connection, Dr. Bowman moved and Dr. Strecker seconded the motion that the question of an appropriation of \$500 be referred to the Budget Committee, and the motion was carried.

Dr. Overholser reported that Dr. Samuel Moreno, a Corresponding Member of our Association, has recently been appointed the Chief of Neuropsychiatric Assistance for the Republic of Mexico and was given a letter by the sub-secretary of The Department of Welfare and Health of The Republic of Mexico asking that the Association give him all possible courtesy. Dr. Moreno is ill but sent a letter. Dr. Overholser moved that a suitable acknowledgment be made to the writer of the letter, the sub-secretary of Health and Welfare of the Republic of Mexico, and that a proper letter be sent to Dr. Moreno as well. Dr. Ruggles seconded the motion and it was so voted.

Dr. Bartemeier moved that the report of the Committee on Psychiatric Social Service be reprinted and sent to the superintendents of all mental hospitals with an appropriate cover letter. This motion was seconded by Dr. Bowman and carried.

Dr. Ruggles moved and Dr. Bowman seconded that the Secretary be requested to send a note of regret at their absence from this meeting to the two past presidents, Dr. Cheney and Dr. Meyer, and Dr. Russell. This motion was passed.

Dr. Ralph M. Chambers presented the report of the Committee on Psychiatric Nursing. Dr. Overholser moved the acceptance of the report and the approval of a resolution read by Dr. Chambers: "The American Psychiatric Association agrees to make possible the continuation of the project now financed by The Rockefeller Foundation at the level at which it has been and is now being conducted until June 30th, 1951, by appropriating funds to supplement the appropriations of The Rockefeller

Foundation." Dr. W. C. Menninger seconded the motion, which was passed.

At the request of President Hamilton, the Secretary read the report of the Committee on Veterans submitted by Dr. Howard W. Potter, Chairman. Dr. Bowman moved the acceptance of the report and Dr. Ratliff seconded the motion, which was passed.

The Council discussed the probable reduction in the amount of the appropriation requested by the Veterans Administration and voted on motion by Dr. W. C. Menninger, seconded by Dr. Bowman, to draft a resolution in behalf of the Veterans Administration.

Dr. Karl A. Menninger presented a preliminary report of the Committee on Reorganization and on motion by Dr. Strecker, seconded by Dr. Gayle, the report was accepted.

Dr. Thomas J. Heldt presented the report of the Committee on Ethics, and on motion by Dr. Ruggles, seconded by Dr. Overholser, the report was approved by the Council.

The meeting was adjourned at 10.30 p.m.

MAY 18, 1947

President Hamilton called a meeting of the Council to order at 9.30 a.m.

Those present:

Officers: Dr. Hamilton, President; Dr. Overholser, President-Elect; Dr. Bartemeier, Secretary-Treasurer.

Councillors: Drs. Appel, Bowman, Cathcart, Gayle, W. C. Menninger, Moersch, Ratliff, Rennie, Ruggles, Strecker, Waggoner, G. A. Young, and former President, J. K. Hall.

Auditor: Dr. Hamill.

Executive Assistant: Mr. Davies.

Chairmen of committees: Drs. Ackerly, E. D. Bond, Braceland, Burlingame, R. M. Chambers, R. McC. Chapman, Farrar, T. M. French, Haskell, Heldt, Kenworthy, N. D. C. Lewis, Malamud, K. A. Menninger, F. W. Parsons, H. W. Potter, P. L. Schroeder, G. H. Stevenson, Tarumianz, Thom, Tiebout, and Zilboorg.

Representatives of affiliate societies: Drs. Billings (Colorado), Colomb (New Orleans), Dexter (New England), Leet (Kentucky), Maeder (Pennsylvania), Moloney (Michigan), Robie (New Jersey), and Suitt and Young (North Carolina).

After some discussion, Dr. Strecker moved, and Dr. Bowman seconded the motion, that Dr. Hamilton improve the phraseology of the membership and fellowship certificates. This motion was passed.

President Hamilton read a report from the Special Committee Advisory to the New York State Department of Social Welfare. Dr. Bowman moved that the Committee be continued, and Dr. Ratliff seconded the motion, which was passed.

President Hamilton read a letter from Dr. Frank Fremont-Smith which accompanied the final report

of Doctor Forrest M. Harrison, Director of the Psychiatric Personnel Placement Service. On motion by Dr. Ratliff, seconded by Dr. Appel, the Council voted to accept the report from the Joint Committee on Placement. It was the consensus of the Council that the report should be published.

The Secretary read the report submitted by Dr. Clifton T. Perkins, Chairman of the Committee on Public Health. On motion by Dr. W. C. Menninger, seconded by Dr. Strecker, the Council voted to accept and approve the report of the Committee. The question of funds for holding a meeting of the Committee is to be referred to the Budget Committee.

Dr. George H. Stevenson presented the report of the Committee on International Relationships. Dr. W. C. Menninger moved acceptance and approval of the report. This motion was seconded by Dr. Strecker and so voted. Dr. Bowman moved that the American Psychiatric Association apply for membership in The World Health Organization. Dr. W. C. Menninger seconded the motion and after some discussion it was so voted. The Secretary was instructed to prepare the application.

Dr. Farrar read the report of the Editor of the JOURNAL. Upon motion by Dr. Ratliff, seconded by Dr. Moersch, the Council voted to accept the report.

Dr. Malamud presented the report of The Program Committee. Dr. W. C. Menninger moved its acceptance and approval. Dr. Ruggles seconded the motion and it was so voted.

Dr. Burlingame presented the report of the Committee on Public Education and after a motion by Dr. Strecker, seconded by Dr. Bartemeier, the Council voted acceptance of the report.

Dr. Bowman moved that Dr. Burlingame be authorized to act as a representative of the American Psychiatric Association at a meeting of the Netherlands Psychiatric Association. Dr. Bartemeier seconded the motion and it was so voted. Dr. Bowman moved that a special committee be appointed to draw up a statement of psychiatric principles and practice and to report to the Council in due course of time. Dr. Menninger seconded the motion and after some discussion it was so voted.

Dr. Chapman presented an interim report for the Committee on Biography which was accepted by common consent.

Dr. Thom presented the report of the Committee on Preventive Psychiatry. Dr. Strecker moved that the report be accepted, approved, and highly commended. Dr. Overholser seconded the motion, and following some discussion it was so voted.

Dr. Ackerly read the report of the Committee on Membership. Dr. Strecker moved that the report be accepted and approved, and Dr. Bowman seconded the motion. The Council voted to accept 95 applications for Associate Membership and to reinstate one Associate Member. The Council voted to accept 352 applications for Membership and to reinstate seven Members. The Council voted to accept 197 applications for transfer from Associate Membership to Membership. The Council finally voted to accept 75 applications for trans-

fer from Membership to Fellowship and the reinstatement of two Fellows. The Council also voted favorably on 2 applications for Corresponding Memberships and the nomination of General Paul D. Hawley to Honorary Membership. After some discussion, Dr. Overholser moved that the Council reconsider the applications for transfer from Membership to Fellowship, and Dr. Ratliff seconded the motion. It was so voted. Upon motion by Dr. Waggoner, seconded by Dr. Bowman, the Council voted to defer the reconsideration of the list for transfer to Fellowships until after luncheon. It was so voted. The Council recessed at 1.00 p.m.

The Council reconvened at 2.15 p.m. and President Hamilton called upon Dr. Tarumianz, who presented the interim report of the Committee on Psychiatric Standards and Policies. Dr. Appel moved its acceptance and Dr. Ratliff seconded the motion. It was so voted. Dr. Strecker moved that the Council approve the creation of a board for the inspecting and rating of mental hospitals, as previously recommended by this Committee, with sufficient funds to be obtained from sources outside the American Psychiatric Association, to organize at once a well-qualified staff of inspectors. Dr. Appel seconded the motion, which was passed.

After some discussion, Dr. Waggoner moved that the recommendations of the Membership Committee in regard to the transfer of Members to Fellowships be approved. Dr. Bartemeier seconded the motion and it was carried.

Dr. Bartemeier moved that the Committee on Membership circulate to the Councillors, within 60 days of the annual meeting, a list of their recommendations for membership in all classes. Dr. Ratliff seconded the motion, and it was so voted.

Dr. Brace and presented a report as Chairman of the Committee on Military Psychiatry. Upon a motion by Dr. Strecker, which was seconded by Dr. Waggoner, the Council voted to receive and accept the report with approval.

Upon a motion by Dr. Gayle, which was seconded by Dr. Appel, the Council voted to remit the dues of Dr. John F. Norris until he resumes practice.

Dr. Bowman moved that the resignation of Dr. A. L. Breen be accepted and his dues remitted. Dr. Moersch seconded the motion, which was passed.

Upon motion by Dr. Strecker, seconded by Dr. Bartemeier, the Council voted to accept the resignation of Dr. Lloyd P. Gray and remit his dues.

Upon motion by Dr. Young, seconded by Dr. Bowman, the Council voted to accept the resignation of Dr. Lamont Henry with regret.

Upon motion by Dr. Ratliff, seconded by Dr. Strecker, the Council voted to accept the resignation of Dr. Arthur W. Ogden with regret.

Upon motion by Dr. Strecker, seconded by Dr. Overholser, the Council voted to accept the resignation of Dr. Evelyn R. Ott and remit her dues.

Upon motion by Dr. Gayle, seconded by Dr. Appel, the Council voted to accept the resignation of Dr. Maurice D. Urist upon payment of arrearage.

Dr. Ruggles moved, and Dr. Strecker seconded

the motion, that the dues of Dr. Ray L. Whitney be remitted and that his resignation be accepted. It was so voted.

Upon motion by Dr. Bowman, seconded by Dr. Overholser, the Council voted that Dr. S. C. Fuller be continued as a member of the Association and his dues remitted. It was so voted.

Dr. Bowman moved that the dropping of Dr. T. D. Cumberland be deferred pending the receipt of a message from the Editor of the JOURNAL. Dr. Overholser seconded the motion, which was passed.

Dr. Strecker moved that the dropping of Dr. F. C. Wagenhals be deferred until a message is received from Dr. Ratliff. Dr. Bowman seconded the motion and it was so voted.

After some discussion, Dr. Bowman moved that the Association allow the Secretary \$100.00 a month for secretarial expenses. Dr. Strecker seconded the motion, which was carried.

Dr. Ruggles moved the adoption of a resolution in behalf of the Veterans Administration. Dr. Bowman seconded the motion, which was carried.

The meeting was adjourned at 4.30 p.m.

#### MAY 19, 1947

President Hamilton called a meeting of the Council to order at 3.30 p.m.

Those present:

Officers: Dr. Hamilton, President; Dr. Overholser, President-Elect; and Dr. Bartemeier, Secretary-Treasurer.

Councillors: Drs. Appel, Bowman, Cathcart, Gayle, W. C. Menninger, Moersch, Ratliff, Rennie, Ruggles, Strecker, Waggoner, G. A. Young, and former President, J. K. Hall.

Auditor: Dr. Hamill.

Executive Assistant: Mr. Davies.

Chairmen of committees: Drs. Ackerly, E. D. Bond, Braceland, Burlingame, R. M. Chambers, R. McC. Chapman, Ebaugh, Farrar, T. M. French, Haskell, Heldt, Kenworthy, N. D. C. Lewis, Malamud, K. A. Menninger, F. W. Parsons, H. W. Potter, P. L. Schroeder, G. H. Stevenson, Tarumianz, Thom, Tiebout, and Zilboorg.

Representatives of affiliate societies: Drs. Billings (Colorado), Colomb (New Orleans), Dexter (New England), Leet (Kentucky), Maeder (Pennsylvania), Moloney (Michigan), Robie (New Jersey), and Suitt and Young (North Carolina).

Reporting for the Executive Committee, Dr. Strecker expressed the recommendation that the New York Society for Clinical Psychiatry be admitted as an affiliate society of the American Psychiatric Association. Dr. Ruggles moved that the report of the Executive Committee admitting the New York Society for Clinical Psychiatry be approved. Dr. Bowman seconded the motion, which was carried.

Dr. Ebaugh presented the report of the Committee on Psychiatry in Medical Education. Dr. Wag-

goner moved that the report be accepted and approved, and that the Chairman of the Committee and whomever else he may choose to assist him be empowered to seek the necessary funds to carry out the program outlined in the reports. Dr. Overholser seconded the motion, which was carried. Upon motion by Dr. Bowman, seconded by Dr. Ratliff, the Council voted to appropriate the sum of \$4,000 to the Committee on Psychiatry in Medical Education for the coming fiscal year. Dr. Strecker moved that the Committee be authorized to communicate with executive officers of the American Psychological Association, the American Sociological Association, the American Association of University Professors, and the American Association of Medical Colleges regarding a conference to formulate definitive planning to present medical education in the social sciences. Dr. Bartemeier seconded the motion and it was so voted.

At the invitation of the Council, Mr. Dean Langmuir met with Council and discussed various questions regarding the awarding of the annual Lester N. Hofheimer Prize for Research. After considerable discussion, Dr. Ruggles moved that the offer of the Estate of Lester N. Hofheimer, deceased, be accepted, the terms carried out with the provision of change of wording to be acceptable to the executors of the estate and the Council of the American Psychiatric Association on advice of our Counsel. Dr. Bowman seconded the motion and it was passed. Dr. Strecker moved that the Secretary be instructed to draw up a proper letter following the suggestions of Mr. Dean Langmuir that it be addressed first to the mother, and then to all the executors, expressing our feelings of appreciation and our belief that this will be a far-reaching memorial to her son. Dr. Bowman seconded the motion and it was so voted.

Dr. DeWitt C. Burkes reported to the Council on the program of arrangements for the 1948 meeting and answered questions asked him by members of Council.

Dr. Bowman moved that the American Psychiatric Association send a letter to Dr. Thomas Parran, Surgeon General of The United States Public Health Service, expressing our appreciation of the fact that the Mental Health Act has been passed and the first steps have been taken to implement it. Dr. Waggoner seconded the motion, which carried.

Dr. Ruggles presented a resolution which he had prepared in behalf of the Veterans Administration. He moved the adoption of this resolution and its submission by the Secretary to the appropriate Committees of the House and Senate. Dr. Strecker seconded the motion, which was carried.

Dr. Tarumianz presented the amended report of the Committee on Psychiatric Standards and Policies. The report was accepted by common consent. Dr. Overholser moved that the Association appropriate \$1,500 for the work of the Committee for the coming fiscal year. Dr. Appel seconded the motion, which was passed.

The meeting was adjourned at 5:15 p.m.

MAY 21, 1947

President Hamilton called a meeting of the Council to order at 4.30 p.m.

Those present:

• Officers: Dr. Hamilton, President; Dr. Overholser, President-Elect; and Dr. Bartemeier, Secretary-Treasurer.

Councillors: Drs. Appel, Bowman, Cathcart, Felix, Gayle, W. C. Menninger, Moersch, Malamud, Ratliff, Rennie, Ruggles, Strecker, Waggoner, G. A. Young, and former President, J. K. Hall.

Auditor: Dr. Hamill.

Executive Assistant: Mr. Davies.

Chairmen of committees: Drs. Ackerly, E. D. Bond, Braceland, Burlingame, R. M. Chambers, R. Chapman, Ebaugh, Farrar, T. M. French, Haskell, Heldt, Kenworthy, N. D. C. Lewis, Malamud, K. A. Menninger, F. W. Parsons, H. W. Potter, P. L. Schroeder, G. H. Stevenson, Tarumianz, Thom, Tiebout, and Zilboorg.

Representatives of affiliate societies: Drs. Billings (Colorado), Colomb, (New Orleans), Dexter (New England), Leet (Kentucky), Maeder (Pennsylvania), Moloney (Michigan), Robie (New Jersey), and Suitt and Young (North Carolina).

Dr. Hamilton read a letter from Dr. George S. Johnson in which he resigned from the Committee on Membership because of his election as Councillor. Dr. Strecker moved the acceptance of Dr. Johnson's resignation and Dr. Cathcart seconded the motion. It was so voted. Dr. Hamilton nominated Dr. John F. Regan of Rhode Island in the place of Dr. Clarence A. Bonner, who retires, and Dr. John D. Griffin of Ontario in place of Dr. Johnson, who resigns. Dr. Overholser moved the confirmation of Dr. Regan and Dr. Griffin, and Dr. Strecker seconded the motion, which was passed.

Dr. Hamilton and Dr. Overholser welcomed the newly elected Councillors, Dr. William Malamud and Dr. Robert H. Felix.

Dr. Robert H. Haskell presented the report of the Special Committee to Consult with Chicago Branch, American Civil Liberties Union and the American Bar Association. Dr. Strecker moved that the report of the Committee be approved and that the Secretary inform Mr. Despres of the Chicago Branch of The American Civil Liberties Union that the Committee will be at their service in case they call a conference in this matter. Dr. Cathcart seconded the motion, which was passed.

Dr. Nolan D. C. Lewis presented the report of the Committee on Nomenclature and Statistics. Dr. Strecker moved the report be accepted and approved, and Dr. Menninger seconded the motion, which was passed.

Dr. John C. Whitehorn presented his report as representative of The American Psychiatric Association on the American Board of Neurology and Psychiatry. Dr. W. C. Menninger moved acceptance of the report and renominated the present incumbent.

Dr. Strecker seconded the motions. The Council voted approval of the report and elected Dr. Whitehorn to be our representative for a second term.

Dr. Paul L. Schroeder presented the report of the Committee on the Legal Aspects of Psychiatry. Dr. Strecker moved that the report be accepted and approved, and Dr. Menninger seconded the motion. It was so voted. Dr. Overholser moved the appropriation of \$300.00 for the expenses of the Committee on the Legal Aspects of Psychiatry. Dr. Menninger seconded the motion and it was passed.

Dr. Manfred S. Guttmacher presented the report of the Committee on Military Psychiatry. Dr. Waggoner moved that the report be approved and that the Secretary write the Secretary of War and the Chief of Staff of the Army that the Association endorses the pilot test study of Universal Military Training as conducted at Fort Knox. Dr. Bowman seconded the motion and it was passed. Dr. Guttmacher reported that the Committee on Military Psychiatry strongly supports Senate Bill 1143 and the corresponding bill in the House of Representatives providing for adequate procurement of specialists for the Medical Department. The Committee recommended that the Secretary notify the Chairmen of the Armed Forces Committees of the Senate and the House that the Association endorses these bills. Dr. Overholser moved the adoption of this resolution and Dr. Bowman seconded the motion, which was carried.

Following some discussion about the salaries of psychiatrists in various public institutions which are not in keeping with the salaries of nonprofessional workers, the Council voted, upon motion by Dr. Overholser, seconded by Dr. Bowman, to refer the matter of salaries to the Committee on Resolutions.

The meeting was adjourned at 6.00 p.m.

MAY 23, 1947

President Hamilton called a meeting of the Council to order at 12.00 Noon.

Those present:

Officers: Dr. Hamilton, President; Dr. Overholser, President-Elect; and Dr. Bartemeier, Secretary-Treasurer.

Councillors: Drs. Appel, Bowman, Cathcart, Felix, Gayle, Malamud, W. C. Menninger, Moersch, Ratliff, Rennie, Ruggles, Strecker, Waggoner, G. A. Young, and former President, J. K. Hall.

Auditor: Dr. Hamill.

Executive Assistant: Mr. Davies.

Chairmen of committees: Drs. Ackerly, E. D. Bond, Braceland, Burlingame, R. M. Chambers, R. McC. Chapman, Ebaugh, Haskell, Heldt, Kenworthy, N. D. C. Lewis, Malamud, K. A. Menninger, F. W. Parsons, H. W. Potter, P. L. Schroeder, Thom, Tiebout, and Zilboorg.

Representatives of affiliate societies: Drs. Billings (Colorado), Colomb (New Orleans),

Dexter (New England), Leet (Kentucky), Maeder (Pennsylvania), Moloney (Michigan), Robie (New Jersey), and Suitt and Young (North Carolina).

Dr. Hamilton asked Dr. Bartemeier to read the report submitted by Dr. Leonard E. Himler, Chairman of the Committee on Industrial Psychiatry. Dr. Strecker moved the adoption of the report. Dr. Moersch seconded the motion and it was carried.

Dr. Overholser read the report submitted by Dr. James S. Plant, Chairman of the Committee on Clinical Psychology. Dr. Moersch moved that the report be accepted, and Dr. Strecker seconded the motion, which was carried.

By invitation, Dr. G. Brock Chisholm met with the Council and discussed various questions regarding the International Mental Health Congress which is being brought together in London, England in 1948. At the conclusion of this discussion, the Council agreed by common consent to refer the matter to the Committee on International Relationships for advice as to action.

Dr. Edward G. Billings read a message from the Colorado Neuropsychiatric Society.

At the request of the Chairman, the Secretary read a letter from Dr. Harry A. Schachter. Dr. Strecker moved that the Council waive Dr. Schachter's dues for the present year. Dr. Overholser seconded the motion but, after some discussion, the motion was defeated.

Upon motion by Dr. Bowman, seconded by Dr. Cathcart, the Council voted to notify Dr. S. Bernard Wortis, who is going to Europe on a medical mission which will visit Austrian and Hungarian universities, to carry the greetings of the American Psychiatric Association to our colleagues in psychiatry in those universities.

Dr. Hamilton read a telegram from Dr. Bruce R. Merrill, of San Francisco, requesting an expression from the Association in favor of legislation similar to that of other states for the admission of patients to State Mental Hospitals in California. Dr. Appel moved that the Council send a message to Senator Bush in California. Dr. Gayle seconded the motion, which was carried. The Secretary and Dr. Bowman were instructed to prepare a suitable message and, after further discussion, the Chairman asked Dr. Bartemeier and Dr. Bowman to draft a second telegram to the Governor of California expressing our gratification that he has favored this legislation and saying that we have wired Senator Bush.

Dr. Malamud moved that Dr. Strecker and Dr. Rennie be continued as members of the Executive Committee. Dr. Moersch seconded the motion. Dr. Gayle moved that the nominations be closed. The motion was seconded by Dr. Bowman and passed. The Secretary was instructed to cast one ballot for Dr. Strecker and Dr. Rennie.

Dr. Hamilton called upon Dr. Bartemeier to inform the Council of the report of the Committee of the Whole, *i.e.*, the meeting of Thursday, May 22nd. The Committee of the Whole had con-

curred in all the resolutions that had been formulated during the section meetings on Tuesday, May 20th. The Committee of the Whole recommended that a full-time medical advisor be appointed by the Council as soon as possible; his functions to be those already outlined by the Committee on Reorganization, and his probable salary between ten and twenty-thousand dollars a year; that the present Committee on Psychiatry in Medical Education constitute a board or council to be given authority to formulate and progressively to implement official policies and flexible standards for effective teaching of psychiatry at its premedical, undergraduate, and postgraduate levels; it would be the responsibility of the Association to finance the work of this board or council on psychiatric education. The Committee of the Whole concurred in the action already taken by the Council in reference to Standards and Policies; namely, that a special board for inspecting and rating mental hospitals be established. With regard to the program, there were no substantial or radical changes recommended. The Committee of the Whole recommended that the news bulletin be combined with the JOURNAL for a period of one year and the matter be discussed at the end of one year; and that the Associate Editors be rotated. The Committee recommended that the Association employ a full-time public relations officer to be appointed by the Council, to have high qualifications which have been outlined in detail, and that the Association provide for an advisory committee of experts; that the Committee on Research be continued and that a full-time director of research be employed; that the Nominating Committee be enlarged, that the whole procedure of nominations and elections take place by mail so that all is taken care of prior to the time of the annual meeting.

The Committee of the Whole discussed ways and means of implementing some of these recommendations and by a majority vote recommended increasing the dues of Associate Members to ten dollars, of Members to twenty dollars, and of Fellows to thirty dollars a year.

Dr. Hamilton stated that the Editorial Board also agreed to the combining of the news bulletin and the JOURNAL. Dr. Hamilton also pointed out that the Nominating Committee could circularize the membership for suggestions for nominations of officers, but that other recommended procedures would require changes in the constitution.

Dr. Bowman moved that the Editorial Board of the JOURNAL be graded according to their length of service; that the two men who have served the longest will have their terms expire this year, the next two, a year from now, and so on, to carry out the provisions of the recommendation, and that the new men—or such men as are reappointed, as may be done—have a term of office of six years. Dr. Bowman also moved that the Editor of the JOURNAL be asked to submit to the Council his recommendations for the appointments to fill these two vacancies which would now occur. Dr. Mal-

amud seconded the motion and, after some discussion, the motion was carried.

Dr. Bowman moved that the Council authorize the Nominating Committee to solicit from the entire membership a preference list of candidates whom they would like to see nominated. Dr. W. C. Menninger seconded the motion, which was passed.

Dr. Hamilton appointed Dr. Bowman to formulate amendments to the Constitution providing for the other recommendations of the Committee of the Whole in reference to the nomination and election of officers.

Dr. Hamilton read a message to the Council from Dr. Charles S. Holbrook, representing the New Orleans Society of Neurology and Psychiatry, who had to leave to preside over Section III.

Dr. W. C. Menninger moved that the dues be increased to thirty dollars for Fellows, twenty dollars for Members and ten dollars for Associate Members, the notice to be accompanied by a letter setting forth our financial problems and expectations. Dr. Moersch seconded the motion. Following further discussion, the motion was carried, with two dissenting votes.

Dr. W. C. Menninger moved that, of the new projects, the order should be: (1) Medical Advisor, (2) Public Relations Officer. Dr. Strecker seconded the motion. The Chairman called for a division of the motion and the Council adopted both priorities.

Dr. Rennie moved that the search for, and the choice of, a Medical Advisor be the responsibility of the Council as a whole, with the proviso that they will ask for all the guidance possible from

the Committee on Reorganization and from the membership of the Association. Dr. Bartemeier seconded the motion and it was carried.

After a short recess the Council went into executive session. Dr. Overholser moved that the Secretary be authorized to see that proper forms are prepared authorizing the incoming Treasurer to sign checks and perform other financial business of the Association. Dr. Appel seconded the motion and it was so voted.

Dr. Bowman moved that the salary of the Executive Assistant be ten thousand dollars a year. Dr. Moersch seconded the motion and it was carried.

Dr. Bowman moved that Miss Jeanne Strenkert's salary be raised \$250.00 for the coming year. Dr. Appel seconded the motion, which was carried.

Dr. Menninger moved that the Chairman, Dr. Hamilton, continue and complete the arrangements with the Lester N. Hofheimer executors. Dr. Appel seconded the motion. Dr. Hamilton announced that he had appointed the following members to serve on the committee which is to select the individuals or group that is to receive the award (Lester N. Hofheimer Prize): Group One—Dr. Franz Alexander and Dr. Harry C. Solomon; Group Two—Dr. George E. Daniels and Dr. Thomas A. C. Rennie; Group Three—Dr. David Levy and Dr. George S. Stevenson; Group Four—Dr. John C. Whitehorn and Dr. Nolan D. C. Lewis. The first group will serve for three years, the second for four years, the third group for five years, and the fourth group for six years.

After a rising vote of thanks to President Hamilton, the meeting was adjourned at 4.10 p.m.



## CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: We are in need of more reports evidencing the originality of thought displayed by the recent paper, "*Rorschach's Test as a Diagnostic Aid in Brain Injury*".<sup>1</sup> New ideas are at a premium and they are sorely needed in the area of diagnostic testing. There is much in this report that deserves the careful consideration of all who attempt to use the Rorschach method as a part of their evaluation of mental patients.

The author was somewhat surprised to find that the paper had so little to say about the problem of differentiating between the schizophrenic patient and those who have suffered from brain damage. Were it not for a rather frequent reference to this problem in the literature, he might believe that the difficulty he occasionally encounters in attempting such a differential diagnosis was the result of his personal interpretative ineffectuality. That the authors of the article have sometimes encountered this problem might be inferred from the statement that "Occasional schizophrenic-like records occurred in each of the brain-injured subgroups." It is particularly in such cases that the need for differentiating signs are needed.

It is therefore with regret that one notices that there were no schizophrenic patients included in the control group in the study under consideration. As a result of this oversight it is entirely possible that, while these "signs" do seem to distinguish between the control group chosen and the patients with organic brain damage, they might also be found in a group of schizophrenic patients. The writer has observed several of them occasionally, although he has no figures available as to the frequency of their occurrence in schizophrenia.

"Consideration of the blots as actual objects" is quite characteristic of certain hallucinating schizophrenics. "Inflexibility" (as defined in the article by Aita, Reitan, and

Ruth) is also occasionally encountered, and "unclear definition of responses" is quite common among the schizophrenic population. The author has also observed "irrelevant comments" and "edging" quite often in such patients. Of course, it is entirely possible that these are more characteristic of the records of patients with organic brain damage. However, we have no basis for this assumption in the data that have been presented. All that can be said with assurance on the basis of the information at hand is that these characteristics seemed to differentiate between the brain-injured patient and those included in the control group, which did not contain any schizophrenic patients.

The writer of this note sincerely hopes that at least some of these "signs" will prove to be helpful in discriminating between patients who have suffered from intracranial insult and those commonly diagnosed as schizophrenics. He has initiated a study to throw light on this question, the results of which will be reported at a later date.

Very truly yours,

JAMES C. STAUFFACHER, PH. D.,  
Psychological Section,  
Veterans Administration Hospital,  
American Lake, Wash.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Practical aspects of the wartime situation in which our investigation was carried out made it impossible to select specific clinical groups large enough to permit a statistical comparison with brain-injured persons. We agree that it has been recognized that brain-injured patients sometimes resemble schizophrenics in certain respects. Beck has gone so far as to say: "Edging is exclusively schizophrenic behavior. The exceptions have in my experience been too rare to be meaningful." (*Rorschach's Test: Volume II-A Variety of Personality Pictures*, p. 60). The writers were obliged, however, to report edging as an observed behavioral tendency in brain-injured patients.

Our investigation only scratched the

<sup>1</sup> J. A. Aita, R. M. Reitan, and J. M. Ruth, *Am. J. Psychiat.*, 104: 6, May, 1947.

surface. We see great need for further investigation, which may render Rorschach's test a more effectual instrument in differential diagnosis. Armitage recently stated: "We must emphasize that the Rorschach signs shown by the (brain-injured) post-traumatics are not necessarily restricted to this group. A previous study has shown that they occur much more frequently among the brain-injured than in a control group of hospitalized patients, including many neurotics but no one with central nervous system disorder. However, it is quite possible that psychic dynamisms in many persons could cause the manifestations of at least some of these signs. The actual value of these signs in differential diagnosis can be determined only when controlled studies have been made comparing post-traumatic brain-injured cases with selected groups of persons with various psychotic and neurotic disorders." (Armitage, S. G. *Psychological Monographs*, No. 277, 1947.)

It should be realized that schizophrenics may not be the only clinical group which have recognizable characteristics in common with brain-injured persons. In a case of severe depression one of the writers recently found several of the proposed signs. Consideration of these similarities might lead

Dr. Stauffacher as well as ourselves to query, "Why are persons with supposedly psychogenic disorders often remarkably like persons with demonstrable brain injury?"

Since our wartime study we have asked ourselves whether some of the Rorschach behavior found among patients with severe brain injury might not be found also in other seriously wounded groups (*e. g.*, paraplegics), arising from trying adjustments with long-standing, major disability and the restricted life of a chronic invalid.

In the light of our experience, then, we would suggest that Dr. Stauffacher not limit his investigations to comparisons with one clinical group. His proposed study will have to consider also (1) that some of his schizophrenic group may have had prior brain injury, (2) that schizoid personalities incur brain injury, and (3) that a small number of patients with brain injury react with a full-blown schizophrenic psychosis (Aita, J. A., and Reitan, R. M., *Psychotic Reactions in the Late Recovery Period Following Brain Injury*. To be published).

Respectfully yours,

JOHN, A. AITA, M. D., PH. D.,  
RALPH M. REITAN, B. A.,  
JANE M. RUTH, B. A.

## COMMENT

### THE GOLDEN AGE OF PSEUDOPSYCHOLOGY

It has been suggested that styles in quackery reflect, in an oblique sort of way, trends or fads widespread in our society. If such be the case, the vaunted tempo and tension of our day, together with the current popularity of the psychiatric theme in our cultural pattern, are promoting a fabulous opportunity for charlatans old and new. For those of us who have read Mrs. Steiner's book on pseudopsychology in the United States,<sup>1</sup> it is difficult to imagine a worse situation than she reports. Yet the advancing front of psychiatric interest suggests a further luxuriant harvest for that devious company ever skulking at the fringes of the medical profession.

It is unfortunate that the field of psychology, which is closely allied with our own, lends itself so readily to the exploitation of distressed people. There exists no license requirement for the practice of that discipline. Self-bestowed degrees, a shingle adroitly displayed, the classified telephone directory, lend the necessary air of authority. As Mrs. Steiner has pointed out in her excellent exposé, anyone may call himself a psychologist and charge a fee for giving advice to people regarding their personal problems. So long as he refrains from the formal practice of hypnosis, and from *claiming* to treat mental disorders, he may operate within the letter of the law. More appalling still is the circumstance that he may set himself up as an expert in psychoanalysis, any bungling of which may wreak untold havoc in the personality of his victims. Truly the tendency of *far niente* in a situation of this sort reflects little credit on psychiatry and legitimate psychology, or on the national and state public health services. There is scarcely another field of activity where prerequisites for engaging in it are so shamefully ignored, and certainly none where the results can be much more devastating.

Mrs. Steiner, who has extensive training

and experience in medical and psychiatric social case work, and spent 12 years on research in the field of psychological quackery, has studied at first hand both the fake experts and their gullible clientele. She has posed as client and has been a legitimate psychological counsellor in the favorite stamping grounds of the adventurers. She has made contact personally and by correspondence with hundreds of these entrepreneurs and with diploma mills turning out "graduates" in psychology in many sections of the country. She has examined all conceivable varieties of pseudopsychologist who find that listening to the problems of worried, confused individuals and making their answers glib and plausible pay lush dividends.

Innumerable instances could be cited from the book of Mrs. Steiner, together with actual names and addresses. The following character will be readily found in the early pages. Though he calls himself "Doctor," the source of his Ph. D. is lost in obscurity. He heads an imposingly styled but unregistered and mysterious "Foundation of Psychological and Hypnotic Research," and receives clients in a fashionable apartment on Park Avenue. He purports to be an ex-medical officer and on the medical board of the American Flying Service Foundation. Strangely enough, his magazine has been issued only once, and the latter Foundation knows him not. Mrs. Steiner looked up this well-advertised importer in order to consult him on behalf of a fictitious "George" whom she described as suffering from an emotional depression plus other psychiatric symptoms. He was indeed one of the most impressive of the ebullient personages functioning in the byways of psychology—distinguished in appearance, suave, courteous and articulate, well versed in psychiatric terminology. Clairvoyance was part of his stock-in-trade, particularly as regards teaching others to achieve it in hypnotic trances. He was, in effect, a dangerously skilled hypnotist, highly successful in getting "patients"

<sup>1</sup> Where do People take their Troubles? By Lee R. Steiner. Boston, Houghton Mifflin Co., 1945.

in his power. The case of "George" he diagnosed first as psychoneurosis, then as dementia præcox, either of which conditions he was prepared to "treat." The illness, moreover, would be no deterrent to George's undertaking research into psychic phenomena, when it appeared that a generous contribution to the "Research Foundation" would be forthcoming.

Charlatanry moves in heterogeneous masquerade. In messing up the lives and health, not to mention the pocket-books of their contemporaries, the self-styled psychologists, with their various qualifying adjectives and weird array of degrees, run a spirited contest with advice-to-the-lovelorn columnists, radio counsellors, vocational guidance quacks, matrimonial and other such dealers in lonely hearts, religious adventurers, spiritualists, handwriting experts, fortune tellers, phrenologists, astrologists, and other dispensers of the occult. There seems to be no limit to the avenues of approach. Ingenuity will always find another when the old one peters out. To the amazing resourcefulness of the charlatan is joined an extraordinary degree of mobility. When business gets tough in one place or the atmosphere becomes a bit hot, he is off in a twinkling to pastures new, whether these be across the street or across the continent. It matters little; for people are the same everywhere and the need for help in personal problems is ubiquitous in all strata of society. And the paucity of reputable agencies and qualified consultants to meet the need is acute.

This serious situation is one which calls for more than gestures of repugnance and intermittent denunciations on the part of the American Psychiatric Association. It calls for unceasing vigilance and steps to set up legal safeguards against malpractice of the above types. The stamping out of quackery, however, does not rest upon this alone. It rests also upon the implementation of a sound program of mental hygiene. It depends further upon the provision of adequate, legitimate consulting services in the fields

of psychology and psychiatry. It depends finally, and perhaps most of all, on the disappearance of ignorance and naiveté in the public at large with regard to the matter and goals of psychology and psychiatric medicine. For only the poverty of actual understanding at the present time can explain the burgeoning of spurious psychological service in all our great cities all over the land.

Public understanding of psychiatric matters was born out of a distorted idea of mental disorders and their treatment, and enough of the dramatic appanage remains to render the field readily vulnerable to misinterpretation. Charlatanry is facilitated by this. It is facilitated too by the assiduous coloring of the psychiatric panorama by the various vehicles of public information and public entertainment. In the radio field, for example, programs featuring accurate psychiatric information run a poor second to fantastic dramas based on the psychopathic theme and to a couple of notorious human-relations circuses with which nation-wide audiences are regaled. No wonder the puzzled layman is so often inclined to extremes in his attitude toward psychiatry—either to fall an easy prey to the charlatan, or to flee anything that smacks of psychiatry, or to have a good laugh at its expense.

It is difficult to arrive at ways and means of combating influences such as these—part and parcel of our cultural pattern—which undo much of our work in the field of public education and make smooth the path of the adventurer. It might not be a bad idea, however, to use this book by Mrs. Steiner as a primary text on avenues of approach and to assimilate the information she has gathered in projects and programs to be sponsored by the Psychiatric Foundation. Our own efforts in the American Psychiatric Association can certainly be more pointed and constructive as a result of this exposé, which were it not for man's extraordinary resistance to the shattering of his myths, should alone be sufficient to close the golden era of pseudopsychology.

C. C. BURLINGAME, M. D.

## NEWS AND NOTES

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**PROGRAM FOR THE 1948 MEETING.**—The program committee is now making preliminary arrangements for the next annual meeting to be held in Portland, Oregon, in May, 1948. Members who wish to submit papers to be presented at that meeting should send a brief abstract to the chairman or to one of the committee members on or before December 1, 1947. The entire program committee meets in New York the latter part of December and wishes at that time to pass on the merits of all manuscripts submitted.

FRANK J. CURRAN, M. D.

Chairman of the Program Committee,  
1626 Oxford Road, Charlottesville, Va.

**GIFT BY DR. ADOLF MEYER TO THE SETON INSTITUTE.**—The Medical Advisory Board of the Seton Institute and the Sisters of Charity of St. Vincent de Paul are pleased to announce the gift from Dr. Adolf Meyer of his entire personal collection of neuro-anatomical and neuropathological material, consisting of some 60 large boxes of serial sections from crucial human case material as well as material of a comparative nature. Included in the gift is an exhaustive card index file of neurological subjects.

The Seton Institute plans to use this material as the nucleus about which to develop a laboratory for the study of neuroanatomy, neurophysiology, and neuropathology. The material will soon be in available form for the instruction of candidates for the American Board Examinations in neurology.

We are deeply indebted to Dr. Meyer for this magnificent gift, and in recognition of his generosity the Neurological Laboratory will be named the Adolf Meyer Laboratory of Neurology.

WENDELL MUNCIE, *Chairman*,  
Medical Advisory Board,  
Seton Institute, Baltimore, Md.

**SALMON LECTURES FOR 1947.**—The Salmon Committee on Psychiatry and Mental Hygiene of the New York Academy of Medicine announces that this year's Salmon Lectures will take place on November 12, 13,

and 14 in the New York Academy of Medicine. Members of the medical profession and their friends are invited to attend. This year's speaker will be Dr. Harold Dwight Lasswell, internationally known political scientist and professor of law at Yale University. His lectures will be titled, "The Dynamics of Power and Personality."

**NEW SOUND FILM AVAILABLE.**—The National Film Board of Canada announces the availability in the United States of the first in a series of films being produced for the Mental Health Division of the Dominion Government Department of National Health and Welfare. The 20-minute black and white film is entitled "The Feeling of Rejection"; 16 mm. prints are available for purchase (price \$40) or for rental (price \$2.50 per day) from the United States offices of the National Film Board of Canada at 620 Fifth Avenue, New York City, or 84 East Randolph St., Chicago 1, Illinois, or at the Canadian Embassy, 1746 Massachusetts Ave., N. W., Washington 6, D. C. Canadian inquiries should be addressed to the Distribution Dept., National Film Board, Ottawa.

**RESIDENCY TRAINING PROGRAMS UNDER VA.**—Two new residency training programs for physicians desiring to train in neurology under the Veterans Administration have been organized. They are designed to prepare residents for certification in neurology by the American Board of Psychiatry and Neurology.

The first program will be conducted under the auspices of the New York University and the Neurological Service of the Psychiatric Division of the Bellevue Hospital, New York City. Training is provided at Bellevue Hospital and the VA New York Regional Office. The staff includes Drs. S. B. Worris, E. D. Friedman, L. Stevenson, S. Brock, M. B. Bender, and M. Kennard. Applications should be sent to Dr. S. B. Worris, Chairman, Deans Subcommittee for Neurology, New York University, 400 East 30th St., New York, N. Y.

The second program has been organized by the George Washington School of Medicine and the Georgetown University Medical School. Training facilities are offered at the VA Hospital (Mt. Alto), Washington, D. C., Gallinger Municipal Hospital, the VA Regional Office, Children's Hospital, and the Army Institute of Pathology. The staff includes Drs. W. Freeman, N. Q. Brill, J. Watts, W. Haymaker, P. Chodoff, H. Stevens, and O. Solnitzky. Applications should be sent to Dr. Walter Freeman, Chairman, Deans Subcommittee for Neurology, 2014 R St., N. W., Washington, D. C.

LONG ISLAND COLLEGE OF MEDICINE, DEPARTMENT OF PSYCHIATRY.—The Long Island College of Medicine, Brooklyn, announces the establishment of an independent department of psychiatry. The teaching of psychiatry was heretofore conducted in co-operation with neurology. Executive officer of the new department is Dr. Howard W. Potter, who now becomes professor of psychiatry.

ANNUAL MEETING, AMERICAN COLLEGE OF PHYSICIANS.—The American College of Physicians will conduct its 29th annual session at San Francisco, April 19-23, 1948. General headquarters will be at the Civic Auditorium. Dr. William J. Kerr and Dr. Ernest H. Falconer, both of San Francisco, are the Co-Chairmen for local arrangements and the program of Clinics and Panel Discussions. The President of the College, Dr. Hugh J. Morgan, Professor of Medicine at Vanderbilt University School of Medicine, Nashville, Tenn., is in charge of the program of Morning Lectures and afternoon General Sessions.

Secretaries of medical societies are especially asked to note these dates and, in arranging meeting dates of their societies, to avoid conflicts with the College Meeting, for obvious mutual benefits.

THE PSYCHIATRIC AFFILIATION IN NURSING EDUCATION.—“No nurse is completely educated until she has had some actual psychiatric nursing experience. At the present time, only 4 states require an examination in

psychiatry for qualification as a registered nurse. There has been, however, such demand within the past two years for schools of nursing for affiliations at psychiatric hospitals that the existing psychiatric nursing schools have been unable to accept them all.

“A psychiatric affiliation teaches a student nurse that all illness has its psychological aspects. It makes clear to the student nurse that patients today demand consideration of themselves as personalities; she learns that patients need nursing care for their anxieties and fears as well as for their headaches and backaches. In fact, she learns that the headache and backache may be due to the anxieties and fears.”—MARION E. KALMAN, R. N., in *The American Journal of Nursing*, June, 1947.

VETERANS ADMINISTRATION ANNOUNCE INCREASED PAY TO VETERANS.—Automatic increases have been authorized, effective Sept. 1, 1947, in the minimum allowances for more seriously disabled veterans enrolled in educational and training courses under U. S. Government sponsorship.

The new law provides that a veteran enrolled in a course under the Vocational Rehabilitation Act, whose disability is rated at 30% or higher, will receive \$115 a month if he has no dependents, and \$135 if he has one dependent. The old rates of \$105 and \$115 for the same two categories will continue to apply to veterans with disabilities rated at less than 30%. The amounts authorized for additional dependents of veterans with disabilities of 30% or more are also increased: for one child from \$10 to \$20 and for each additional child from \$7 a month to \$15. No change is made in the \$14 monthly allowance for a dependent parent.

The veteran in job training may retain whatever wages are paid him, but if his salary plus his subsistence allowance exceeds the wage of a beginning trained journeyman VA will reduce his subsistence allowance proportionately.

If the veteran-trainee is enrolled in school his tuition and fees are paid and his books and supplies are provided by VA. If he is enrolled in on-the-job training, VA provides the necessary tools.

**NEW CLINIC IN SEATTLE.**—Announcement has been received of the establishment of the Northwest Clinic of Psychiatry and Neurology, at 1116 Spring St., Seattle 4. The services of the clinic include complete diagnostic and out-patient treatment facilities, with psychiatric hospital beds available at an affiliated sanitarium. In addition to therapy, the staff anticipates for the clinic an expanding program of teaching and research. Associated with the clinic are Drs. J. L. Henderson, E. D. Hoedemaker, D. W. Orr, and F. L. Swanson.

**ASSOCIATION FOR MENTAL AND PHYSICAL REHABILITATION.**—The first annual convention of the Association for Mental and Physical Rehabilitation was held in Chicago, Illinois, June 5 to 7, 1947. Representatives from 41 states attended the scientific and clinical session. The meeting included many of the nation's outstanding physicians and educators in the field of physical medicine and rehabilitation. Corrective physical rehabilitation personnel, under the leadership of Dr. Edward Greenwood, from Southwood Clinic and Winter General Hospital, Topeka, Kansas, discussed the clinical phases of the prescription for physical rehabilitation. The importance of observational reports to acquaint the physician with the patient's reaction to activity was stressed. The following members were elected officers of the association: President, Jack E. Jones, Atlanta, Georgia; Vice President, Leo Berner, New York City; Secretary, Carl Purcell, Chicago; Treasurer, Eli Ellis, Canandaigua, N. Y.; Director of Publications and Research, Paul Roland, Danville, Illinois; and President Elect for 1948, Sam Boruchov, Northport, Long Island, N. Y. The organization has approximately 500 members.

**POSITIONS AVAILABLE IN WISCONSIN.**—For psychiatrists: Positions are available in three penal institutions, with the following requirements: graduations from a Class A medical school, general internship in recognized hospital, knowledge of clinical medicine, and specialized background in psychiatry. The position offers a salary range of \$475-575, plus \$30 cost-of-living bonus.

For psychologists: Positions in three

penal institutions with the following requirements: four years of undergraduate study with major in psychology, plus one or two years of graduate work, or one to two years actual experience as a clinical psychologist, personnel placement advisor, vocational counselor, or instructor of college or university courses dealing with psychometric measurement and analysis. Salary range: \$250-\$300, plus a \$30 cost-of-living bonus.

Inquiries may be addressed to the State Bureau of Personnel or the State Department of Public Welfare, Madison, Wisconsin.

**NATIONAL COMMITTEE FOR MENTAL HYGIENE, 38TH ANNUAL MEETING.**—The 38th annual meeting of the National Committee for Mental Hygiene will be held on Wednesday and Thursday, November 12 and 13, 1947, at the Hotel Pennsylvania, New York City. The two-day program will be devoted to mental hygiene issues in "Preparing for World Citizenship." Problems of constructing the forces that mold minds in home, school, church, and job will be discussed. The International Bill of Rights in relation to mental hygiene will be examined, followed by a discussion of the mental health potentialities of the World Federation for Mental Health, a voluntary agency, and the World Health Organization, a public agency (of the United Nations) for international cooperation. It is planned to present an analysis of 2,000 letters written to the Committee by people in desperate need of psychiatric services. The Lasker Award for this year's most significant contribution to popular adult education, especially in parent-child relationships, will be presented at the annual luncheon meeting on November 13.

**PSYCHIATRIC SOCIAL WORKERS APPOINT EDUCATIONAL SECRETARY.**—The American Association of Psychiatric Social Workers has announced the appointment of Miss Madeline Lay as educational secretary. Miss Lay, who has had broad experience in psychiatric social work, will act as an advisor to schools of social work and to social work departments of universities in setting up standard curricula for the training of psy-

chiatric social workers. This work has been made possible by a grant from the Commonwealth Fund for two or more years. Under this supervision there will be assurance that schools undertaking training in psychiatric social work will include in their classroom instruction all courses that have proved necessary, and that adequate provision is made for practical field work training which comprises half the courses. This must include work in psychiatric or child guidance clinics, as well as casework dealing with problems of families or children.

RESEARCH FELLOWSHIPS, THE AMERICAN COLLEGE OF PHYSICIANS.—The American College of Physicians announces that a limited number of Fellowships in Medicine will be available from July 1, 1948 to June 30, 1949. These Fellowships are designed to provide an opportunity for research either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work. The stipend will be from \$2,200

to \$3,000. Application forms will be supplied on request to the American College of Physicians, 3400 Pine St., Philadelphia 4 Pa., and must be submitted in duplicate no later than Nov. 1, 1947. Announcement of awards will be made as promptly as is possible.

MUSIC RESEARCH FOUNDATION, INC.—Dr. R. C. Williams, Assistant Surgeon General, has accepted appointment as a member of the board of directors of the Music Research Foundation, Inc., a nonprofit organization which is now formulating plans for the continuation and expansion of its research activities. It is proposed that a program of scientific inquiry into the therapeutic use of music be initiated. Selected psychiatrists will conduct investigations into the kind of music which has most therapeutic value and the types of mental patient most responsive to its use. Methods for the integration and utilization of present knowledge by leading mental institutions will be explored, and every effort made to encourage the use of music in the treatment of disease. The executive secretary of the organization is located at 2909 Stanton Ave., Silver Spring, Md. Reprints of scientific and general articles on this subject are now available without cost.

#### RESOLUTION ADOPTED WITHOUT DISSENTING VOTE BY THE GROUP FOR THE ADVANCEMENT OF PSYCHIATRY, AT ITS MINNEAPOLIS, MINNESOTA, MEETING, JULY 2, 1947

Because of recent newspaper and magazine articles which claim that a conflict exists between psychiatry and religion, and because of the resulting confusion of and the harm done to patients and their families, the membership of the Group for the Advancement of Psychiatry, meeting in Minneapolis, believe it is highly desirable to make the following statement:

For centuries, religion and medicine have been closely related. Psychiatry as a branch of medicine has been so closely related to religion that at times the two were almost inseparable. As science developed, however, medicine and religion assumed distinctive rôles in society, but they continue to share the common aim of human better-

ment. This also holds true for that method of psychiatry known as psychoanalysis.

We, as members of the Group for the Advancement of Psychiatry believe in the dignity and integrity of the individual. We believe that major goal of treatment is the progressive attainment of social responsibility. We recognize, as of crucial significance, the influence of the home upon the individual and the importance of ethical training in the home. We also recognize the important rôle religion can play in bringing about an improved emotional and moral state.

The methods of psychiatry aim to help patients achieve health in their emotional lives so that they may live in harmony with society and with its standards. We believe that there is no conflict between psychiatry and religion. In the practice of his profession the competent psychiatrist will therefore always be guided by this belief.



## BOOK REVIEWS

AGING SUCCESSFULLY. By *George Lawton*. (New York: Columbia University Press, 1946.)

This book is written for the average reader and is designed to help him understand and deal with some of the problems of aging. As such it can be recommended. It is a book which any doctor can feel safe in putting in the hands of a patient.

The book is simply and clearly written. Technical language is avoided throughout. In general the reviewer finds himself in accord with what is written. No criticisms of a serious sort seem indicated. At times the author makes statements concerning controversial subjects as if they were completely settled. Such a defect is probably necessary in any book written as this is and is a very minor criticism.

The author's philosophy may be summed up as follows. He wishes to see that older persons develop further interests and do not gradually become narrowed and withdrawn. He points out that the way to prepare for old age is to develop the right sort of personality from the start; therefore, such preparation actually starts in childhood. He discusses the defects and advantages of aging; of the necessity of developing an attitude toward life which allows one to grow old without too much conflict and difficulty. He criticizes the American cultural attitude that "makes growing old almost a minor crime." He gives specific advice on how to develop a healthy attitude toward aging. Of perhaps special interest is the chapter on "Love and Maturity," which advocates more marriages among older persons. Various case histories are given to illustrate the author's thesis.

KARL M. BOWMAN, M. D.  
Langley Porter Clinic, San Francisco.

DARK OF THE MOON, Poems of Fantasy and the Macabre. By *August Derleth*. (Sauk City, Wis.: Arkham House, 1947.)

Psychiatrists who are interested in strangeness so often encountered in the personality of schizoid individuals will find this book a treasure trove of peculiar imagery and weird reactions. The editor has combed English literature for poems written in a certain style and has here gathered an interesting and unusual collection of lyrics verging on lunacy. Old favorites from William Blake to Poe are represented with poems that are not representative of their usual style, and many modern poets will be found here writing in veins and modes that bring the book up to the Atomic Age as indicated by the bizarre rhymes and associations of the authors.

Unintentionally, or perhaps unwittingly, the editor has performed a service to psychiatrists interested in the relationships between psychiatry and literature. An interesting feature of this book is the way symbols and patterns recur over and over

again in poets of different countries and different periods.

MERRILL MOORE, M. D.,  
Boston, Mass.

JOBS AND THE MAN; A GUIDE FOR EMPLOYERS, SUPERVISORS, INTERVIEWERS, COUNSELORS, FOREMEN, AND SHOP STEWARDS IN UNDERSTANDING AND DEALING WITH WORKERS—VETERANS OR CIVILIANS. By *Luther E. Woodward, Ph.D.*, and *Thomas A. C. Rennie, M.D.* (Springfield, Ill.: Charles C. Thomas, 1945.)

This is a very handy little book in the field of industrial psychology. It contains not only a wealth of material useful to employers, etc., as indicated in the subtitle, but many points of interest and utility for industrial physicians. Not least of these is the classified bibliography on mental hygiene in industry which appears at the end of the book, listing the most significant titles—books and articles—which have come off the press in this field in recent years.

In preparing this work, special consideration was given the problems of the veteran and the factors involved in his reassimilation into industry. There are a number of chapters dealing with the change from military to civilian living, and also with some of the special problems presented by veterans with a physical handicap or a nervous condition. Though the war and its urgencies have receded in point of time, these special problems remain current, as they will for many years to come. Proper placement based on individual needs of the veteran, together with requirements of the job itself, is advocated in this book, and suggestions are given for helping the returned veteran after he is on the job. The techniques recommended should be applicable to the whole field of employee-employer relationships.

A feature of the presentation is the chapter on techniques in industrial interviewing and counseling, prepared with the assistance of Dr. L. E. Himler of General Motors Corporation. It includes detailed suggestions for developing the art of interviewing and counseling, so important in the modern approach to personnel relations, the fostering of morale, and the furtherance of mental hygiene in industry.

C. C. BURLINGAME, M.D.,  
The Institute of Living,  
Hartford, Conn.

ESSENTIALS OF ALLERGY. By *Leo H. Criepp, M.D.* (Philadelphia: J. B. Lippincott Co., 1945.)

One of the better books on allergy, the title describes the contents accurately, namely, that it gives all the essentials of the subject without being confusing or incomplete.

The allergic reaction, as one of the defense mechanisms in coping with harmful agents, differs from the inflammatory reaction in one particular of practical and scientific importance. This is the fact that it is much more intimately dependent upon, and influenced by, the deep, instinctual urges and the more commonly recognizable anxiety states. Indeed, one suspects that much of the success of therapy used by allergists may be due to indirect psychotherapy (perhaps not so indirect after all) rather than to the ingenuity and time-consuming complexity of the régime involved. Let no one imagine that it is the author who suggests such a thing, but the reviewer believes that seasoning with a little heresy is a good thing at times on some subjects.

This book can be highly recommended; while Dr. Crip has written a treatise that is short, yet this is a virtue. He does not omit, as larger works invariably do, that most essential feature of the study and treatment of allergy: the life of the person who is the patient.

TREVOR OWEN, M.D.,  
University of Toronto.

THE YEARBOOK OF PSYCHOANALYSIS, Vol. 2. (New York: International Universities Press, 1946.)

The managing editor, Dr. Sandor Lorand, and his editorial board, Drs. Henry Alden Bunker, Ernest Jones, Bertram D. Lewin, and C. P. Oberndorf, have selected the following 14 papers for the 1946 edition of the Yearbook of Psychoanalysis:

The Genetic Approach in Psychoanalysis, Heinz Hartmann and Ernst Kris.

Nature and Classification of the So-Called Psychosomatic Phenomena, Otto Fenichel.

Ego Analysis as a Guide to Therapy, Thomas M. French.

The Psychology of Punishment, Charles Berg. Problems of Conception. Psychologic Prerequisites of Pregnancy, Helene Deutsch.

Pathological Weeping, Phyllis Greenacre.

Neurotic Acting Out, Otto Fenichel.

A Special Form of Self-Punishment, Rudolph M. Loewenstein.

The Therapeutic Role of Drugs in the Process of Repression, Dissociation and Synthesis, Lawrence S. Kubie and Sydney Margolin.

Psychology and War Conditions, Ernest Jones.

Psychoanalysis and Morals, J. C. Flugel.

The Problem of War and Peace, J. C. Flugel. Dostoevsky and Parricide, Sigmund Freud.

Eder as Psychoanalyst, Edward Glover.

Five of these papers appeared in The Psychoanalytic Quarterly, one in The Psychoanalytic Review, one in Vol. I of "The Psychoanalytic Study of the Child," one in The British Journal of Medical Psychology, one in Psychosomatic Medicine, one in The International Journal of Psychoanalysis; and the rest are extracts from 3 recently published books. One is from Helene Deutsch's "Psychology

of Women," two from Dr. Flugel's book, "Man, Morals and Society," and one on Dr. Eder from the "Memoirs of a Modern Pioneer."

It would be impossible to give here a detailed review of these works. Most of them contain stimulating and some fascinating and original material. With the exception of Professor Freud's paper on Dostoevsky which was first published in 1928 and now appears in a revised translation, all the other papers appeared in 1945. Judging by the works contained in this volume it is quite obvious that the editors selected them for their new and original contributions to psychoanalytic thought. This reviewer feels that this task has been efficiently accomplished.

A. A. BRILL, M.D.,  
New York

THE MENTALLY ILL IN AMERICA: A HISTORY OF THEIR CARE AND TREATMENT FROM COLONIAL TIMES. By *Albert Deutsch*. (New York: Columbia University Press, 1946.)

This is the third printing of "The Mentally Ill in America," which had its first two printings in 1937 and 1938 by Doubleday Doran & Company Inc. A very extensive review was originally made by Dr. C. B. Farrar and published in the American Journal of Psychiatry, Volume 94, page 239.

The author of this book has traced the roots of psychiatry back to the earliest Egyptian records. He unfolds this fascinating story step by step, giving the social background of each stage so that the attitudes of each generation are presented in the light of the cultural backgrounds. It is more than a history of the mentally ill in America since the author outlines our "old world heritage," pointing out the carry-over to this continent of the worst in medieval thought regarding mental illness. The social, legal, administrative, and medical aspects of the mentally ill are described, and it is evident that Mr. Deutsch has expended a great amount of research in collecting his data. The struggles, disappointments, and triumphs of the leading personalities in this drama stimulate the reader to an appreciation of how far we actually have progressed, often against determined opposition, ignorance, and reluctance of governments to support treatment and research in this important field.

The last chapter, "Towards Mental Hygiene," includes a splendid summary of the psychological and physiological advances of the past 50 years with considerable space devoted to Kraepelin, Freud, Pavlov, and Meyer. As it is almost 10 years since the book was first published, the opinions regarding the shock therapies have changed considerably, but this detracts little from the main story. Prevention is stressed in this final chapter and rounds out a book which gives the student of psychiatry a most fascinating and comprehensive background.

The bibliography contains some 380 references.

J. G. DEWAN, M.D.,  
University of Toronto

# THE AMERICAN JOURNAL OF PSYCHIATRY

## LESSONS TO LEARN

### PSYCHIATRY IN WORLD WAR II<sup>1</sup>

ALAN GREGG, M. D., NEW YORK, N. Y.

Let us consider the lessons that the war experience offers to psychiatrists, or—if you prefer to make a boldly optimistic suggestion—the effects of war upon psychiatry. For myself I would prefer to say “the lessons the war offers psychiatrists.” This caution comes from my respect for the salutary cynicism of the remark that “the only thing we learn from history is that we don’t learn from history,” and the cruel reality that there is none so blind as those that won’t see. And I remember how thoroughly Thomas W. Salmon’s famous Volume Ten was neglected by those for whom it was written. The gravest issue is not what are the lessons for psychiatrists, for the military, and for society at large to be learned from the war, but whether in the urgent preoccupations of what Elton Mayo calls our adaptive society we are going to manage to learn or retain much of anything from the experience of the war. Make no mistake about it, the pressing and immediate tends to crowd out the ultimately valuable. Learned Hand said of this generation, “In its pathetic pursuit of that ever-retreating pot of gold, it puts its trust in loyalties, in creeds, in causes, in regulation, in institutions, in courts, in propaganda. The one thing to which it will not trust is the vagrant mind and the self-directed soul. So be it, by their fruit ye shall know them; and do we need to be assured that our fruit is bitter?” It will take some heroic effort to learn all the lessons the experience of the war offers us. It will require vagrant minds and self-directed souls.

Like any experience that is both complex and intense, the war discovered truth not previously known, corrected some opinions, confirmed or proved some views not widely held before, and suggested many ideas that deserve further attention. But so neat a scheme becomes formidably complex if you

realize that at least five main groups of persons made these discoveries, corrections, confirmations, and suggestions. These groups were psychiatrists, physicians who are not psychiatrists, the military, the civilian population, and the patients. Each group made its own discoveries, jubilant or poignant, changed its views reluctantly or ingenuously, proved its convictions with varying degrees of forbearance or vindictiveness, and exercised its imagination in forming questions to be studied later or casually abandoned. There is not time to make or to defend a table of results that would place each of these changes in its proper niche. But we may follow the main headings.

Discoveries which were completely new to everyone involved were not numerous. The delineation of combat fatigue and the value of promptness in dealing with it probably deserve the term “discovery.” “Sixty percent of combat casualties were salvaged for further duty within 15 miles of the front; an additional 30 percent were salvaged for non-combatant jobs in overseas areas.”<sup>2</sup> It was hardly news to the military that the criterion for the psychiatrist in war centers around the objective of maintaining as large a number of effective fighting men as possible whether by preventative measures or therapeutic efficiency. But a good many doctors discovered that such a criterion implied a broader responsibility for human beings than they had ever been called upon to exercise in civilian practice. Several psychiatrists discovered the fundamental workaday value of expressing themselves in non-technical terms, whether to patients or commanding officers. May their tribe increase! They even discovered the present inadequacy of their own professional nomenclature and its futility unless subject to revision. Psychological tests, when sufficient time was

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

<sup>2</sup> W. C. Menninger, Bulletin of the U. S. Army Medical Department, Vol. VII, No. 4, p. 359.

permitted for them to be made thoroughly, proved to have predictive value and this was at long last revealed to the military mind, though no one would infer that the military authorities had any large amount of previous conviction in the matter from the average time of 3 to 5 minutes devoted to that end in the induction examination. Perhaps the most significant discovery on the part of all concerned relates to the realization of how tremendous a range of symptoms and maladaptations lies between the thoroughly efficient, well-adjusted soldier and the frank psychotic. From this realization, which amounted to a discovery in its importance if not exactly its novelty, came the creation of a Division of Neuropsychiatry in the Surgeon General's Office comparable to those of Medicine and Surgery. Psychiatry changed from a specialty to a generality—so to speak—and the psychiatric or psychological component of illnesses previously considered as exclusively medical or surgical began to be recognized as never before. Such discoveries also brought into sharp focus the inadequacies of the usual medical history taking and the painful incompetence and even the contempt that a large number of our medical officers commonly showed for psychiatry. No experience could have revealed more effectively than the war the nonsense of isolating psychiatry from the rest of medicine.

Since I doubt whether any of the above-mentioned "discoveries" fully deserve that designation I can pass with a purist's relief to the consideration of the next category—opinions which were corrected. First, a good many psychiatrists rightly lost the complacency they had enjoyed in civilian life. The war showed conclusively that no very good way to forecast a man's threshold of endurance or his capacity to profit from help is yet known to psychiatrists. They came to see that the maintenance of morale and discipline demands that the group be defended against the deflection and selfishness of the individual. This was an extremely significant reversal of the usual solitudes. They came to see, too, that eliminating the most poorly endowed 10% of an army is not a process that can be repeated until the remainder are perfect soldiers. Psychiatrists began to realize that combat service with troops gave them

understanding and status as did nothing else. They saw the power of incentive, of motivation, of loyalty, of morale as few civilian experiences ever reveal it. And the war experience also corrected any assumption that medical officers were the least likely of all army officers to be retired because of psychiatric difficulties. Indeed the assumption that officer selection in any branch of the service may best be left entirely to brother officers came in for gradual correction, and the value of a combined judgment of psychologist, psychiatrist, and line officer may be said at least to have emerged though perhaps not to a degree of wide acceptance. Though there were some memorable exceptions, it has been heartening to observe that as a general rule the higher the echelon the greater likelihood of support for psychiatrists of competence and character. And from the dearth of psychiatrists I hope we have learned the extraordinary value of ancillary personnel—psychologists; social workers; educational, occupational, recreational therapists; nurses and attendants.

Views not widely held at the outset of the war were gradually confirmed. Group psychotherapy and psychotherapy under sedation received skillful refinement and expansion. The costliness and futility of skimping the psychiatric examination of inductees, which was long over-ridden under the pressure of rapid expansion, became eventually evident to others than indignant psychologists and psychiatrists. The cost of these brash blunders, were it ever to be reckoned among the Veterans Administration expenses over the next 50 years, would remind me of our first surgical clinic in the medical school in 1914 when Harvey Cushing showed us an elderly man with a pain in his leg. We students all had our guesses as to the cause. It was due to a piece of lead, imbedded at the battle of Antietam.

The examination of inductees was conducted at first without any effective attempt to make use of civilian institutions whose records of the social history of a recruit would have provided prompt and valuable evidence of his adaptability and presumable stability. Only gradually was the value of such evidence confirmed by experience. The value of having a team of psychiatrist, psy-

chologist, and social worker was established—let us hope once and for all. The importance of a thorough knowledge of anxiety and the unvarying need of psychiatric training of all medical officers were proven as the war went on. But perhaps the most desperately and thoroughly proven view of all was that our medical schools had been giving grossly inadequate training in psychiatry. Their graduates as a rule misunderstood, ignored, and undervalued psychiatry. The number of trained psychiatrists was far below the need—so far below as to excuse almost any charge that could be leveled at the performance of the few that shouldered a staggering task. But what excuse can be offered if our medical curricula still drive onward, repeating the same mistake today—and tomorrow?

The experience of war suggests a few assumptions that may deserve reflection. First, it is not too early to set a salutary example by accepting for our own profession the task of searching for significant psychological tests or psychiatric evaluation of prospective medical students. Must we leave to business, or education, or the army to find out how to foretell the threshold of endurance of external stress? Secondly, let us not forget that unless psychiatrists in civilian life deliberately and persistently try to bring into the psychiatric boards and specialist societies a considerable number of regular military doctors, and unless the Army and Navy continue arrangements to encourage specialization which will qualify a considerable number of their medical officers as specialists, we shall perpetuate the same handicaps of misunderstanding and friction that accompanied the efforts of the war years. Third, the promptness, the ease, the frequency, and the value of psychiatric consultations on medical and surgical wards in military hospitals suggest that psychiatric consultations in our general hospitals could be of equal advantage to patients and to the doctors responsible for bringing every helpful resource to bear upon the patient's problem. Fourth, there should be a major revision of medical education, for only a radical change will provide in the education of the doctor the opportunity for adequate training in the psychiatric care of human beings for a full and

happy life as well as a symptom-free existence. Fifth, what are the causes for the percentage of men between 18 and 35 being disqualified for military service because of some kind of disorder of personality—14% of all the men examined? Does a social structure which, in peacetime, shows one in seven so definitely deviant not deserve profound reflection and study? Sixth, from the war experience psychiatrists learned many of the factors of successful leadership: the value of the leader's example, his awareness of the emotional needs of his men, his constant and manifest solicitude, his knowledge of individual men under him and his personal interest in them. Are industrial relations and problems of civilian leadership likely to be solved in complete disregard of these factors of leadership proven in the war?

Lastly, let me offer a personal opinion not only subject to immediate correction but soliciting correction if I am wrong. I do not recall within the last 40 years the names of any research men in the natural sciences who ever did any notable investigative work while on the teaching staff of West Point or Annapolis. I submit that the result of an education received in institutions where students are not directly exposed to the atmosphere of research is quite naturally a mind which divides information or ideas of all kinds into only two groups: the first group comprises all the ideas which are true, sound, and dependable; in the other group are the ideas which are false, misleading, unproven, and unreliable. This is a deceptively precise but a dangerously inadequate attitude, for it misses the priceless imprint which comes from training in research, namely the realization that there is still a third category of ideas—hypotheses not yet known to be valid that might be true if by research they could be proven. There is an immense gap between minds trained by recitation, indoctrination, and flawless discipline in the traditional military education and minds exposed to the task of finding out what is not yet known. If cadets at West Point and Annapolis were exposed to first-rate research work, their approach throughout their subsequent careers toward finding solutions to new problems and their attitude to those who could help them in this task

## OBSERVATIONS OF PSYCHIATRY IN WORLD WAR II<sup>1</sup>

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I appreciate the opportunity to discuss with you my observations of psychiatry in World War II. Most of you are so familiar with the subject that, due to the time available for presentation of these views, I will limit my comments to certain experiences culled from my memory which represent to me, at least, the major psychiatric problems encountered during that critical period. These are my personal views and are not an official expression of the War Department views.

At the time of mobilization for World War II, which took concrete form in September 1940, there was a lack of unity in the essential understanding necessary for coordinated planning and resultant actions between the offices of the Surgeon General of the Army and the Surgeon of the Air Forces. In this discussion we can dispose of that problem by stating that it is a primary responsibility of the War Department to correct a lack of coordination and unity in administrative offices of that agency of government. That statement does not imply an unfriendly reception of assistance from members of this group who are not at the time serving on a War Department consulting group. However, with reference to the particular interests of The American Psychiatric Association, there is the broader aspect of that problem; that of effecting an organization which will increase efficiency and promote economy in the use of all governmental medical personnel and facilities and which will maintain a program to make the most effective use of the services of the trained psychiatrists available at any time. The solution of those problems sets up well-defined objectives and, in my opinion, imposes upon the responsible governmental agencies the necessity of continuing study, including calls for your assistance, until the best end results have been accomplished. It is an important fact to be noted by all

that if unification of the armed services is accomplished it will make the solution of those problems much simpler. That is the *first lesson* to which I think attention should be invited. However, the brevity of these comments should not be interpreted as an indication that satisfactory results can be accomplished without great expenditure of effort based upon sound planning.

Because our country was unprepared for war in 1940, months were required to effect a confused and hurried beginning in the mobilization of the National Guard and the induction of civilians under the Selective Service Act. Yet, within a period of 6 months after troop movements were initiated, several hundred thousand officers and soldiers were separated from their homes and with little or no psychiatric examination were dispatched to training camps. Upon arrival at those camps, a considerable number of those prospective soldiers were taken directly from the arriving trains to the psychiatric wards of camp hospitals in states of mental disturbance which required restraint, and many others, who were potential or confirmed psychoneurotics, experienced aggravation of those tendencies because of assignment to military units under the charge of green troop leaders fresh from civilian life. It was regretfully recognized at the time that training of junior leaders during the last war, of necessity, had to be very hurried, and emphasis had to be placed on instruction in "how to kill" and "how to keep from being uselessly killed." Little time was available for educating young troop commanders upon sound lines in the psychology of military leadership. This lack of adequate education in leadership coupled with the emphasis placed upon tactical and technical training caused those young troop commanders to exaggerate the importance of keeping every recruit up to a maximum level of efficiency in military training; also, the lack of adequate education in military leadership was largely responsible for failure in the utilization of many soldiers who, though ap-

<sup>1</sup>Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

parently acceptable, proved inadaptable to military service and resulted in transferring many laggards in military training, for any reason whatsoever, to the care of the medical department. In this connection it was stated in one of the reports to the War Department, made by an operational study group of eminent consultant psychiatrists and army officers, of which I was a member, that "the reason these soldiers were in the charge of the medical department was not because the medical department wished to make patients of them but was because of the inability of line commanders to make soldiers of them." That trite statement represents an oversimplification of those major problems, yet it points up an important aspect of those problems. Then too, in this early period of mobilization, the psychiatric wards of most of the army hospitals were controlled by inexperienced psychiatrists and no well-organized mental hygiene centers were established in the training camps. The Army was understaffed with trained psychiatrists and was tardy in calling upon the services of civilian psychiatrists. The psychiatrists ultimately called into service needed time for orientation. The number of civilian psychiatrists, psychologists, and trained social service workers was insufficient to meet the demand; therefore numbers of doctors, mostly neophytes in the medical profession, were with inadequate preparation in psychiatry plowed into that field. Those improvised solutions frequently resulted in confusing rather than assisting leadership in training, leadership in the service echelons, and leadership in battle. As a consequence, hospitals were overloaded and the valuable services of the medical specialists were wasted. The result was a "bull market" in casualties calling for the attention of psychiatrists and an inflation in psychiatric problems from which the services did not fully recover until well after V-J Day.

Reasonably satisfactory solutions of the problems set forth in the first lesson appear simple in comparison with a successful attainment in meeting the challenge presented by some of the problems embodied in this *second lesson*. Those problems are correlated and are so fundamental that they reach down into every home in our country and

impose upon us the necessity for (1) instituting more adequate procedures, capable of speedy adoption, for screening examinees for military service and for establishing more satisfactory standards of physical and mental fitness, to the end that men who can have no possible usefulness in the armed service will not be inducted or enlisted; (2) instituting policies and programs to make available early and adequate examinations and treatment by specialists to the end that the armed services will not be called upon to hospitalize and treat for long periods but will be able to discharge under a proper diagnosis all psychotics and unusable psychoneurotics whose illnesses become manifest at an early date following entry into the service; (3) instituting a sound policy for eliminating from our social body or for finding usefulness in the armed services in an emergency for the hundreds of thousands of men who, though apparently acceptable, proved militarily inadaptable in the past war because of psychoneurotic complaints or other manifestations of situational reactions or personality disorders.

If plans are formulated and actions taken for correction of the conditions mentioned above, which plagued us in the past emergency, I am sure there should be available to the services an adequate number of qualified psychiatrists, psychologists and social service workers to meet the legitimate needs for the services of those specialists.

In formulating plans to be made and actions to be taken for improvement of or correction of those three situations, what are the essentials?

(1) The Armed forces by cooperative planning in association with organized groups and individual leaders in civilian medicine *can* set up more adequate procedures for processing selectees in an emergency, so that the induction or enlistment of unusable manpower will be greatly reduced. In like manner satisfactory standards for physical and mental fitness can be determined. A thorough study of the selective service records and the errors revealed in the medical history of World War II should furnish the premises for discussion of those subjects so that logical conclusions would be developed and proper corrective actions

recommended. Those are tangible tasks; satisfactory standards and procedures can be fixed, yet the path of successful implementation is stalked by that dreaded imponderable, the personal equation. Will local selection boards put patriotism above selfishness; can those boards be persuaded to resist the desire to sweep into the Army from the streets of their communities the lame, the halt, the blind, and the mental misfits—particularly the latter; will the emergency permit time for adequate mental and physical examinations; will medical examiners be available in satisfactory quality and quantity? Therefore, despite sound plans and excellent organization, to effect better and more uniform accomplishment of selection and induction boards in an emergency will always challenge the administrative capacity of the several responsible agencies. In principal part, such accomplishment requires more effective work in the field of the social sciences as applicable to the civilian elements involved. Inasmuch as this Association should be the leading element in such endeavors, it is my opinion that the Association should accept the responsibility of resolving those problems and of advising the military as to actions considered requisite.

(2) Sound plans properly implemented will prevent abuse of hospitalization and misuse of the valuable time of specialists and will effect early discharge under a proper diagnosis in instances where such procedures are applicable. Those plans must provide for practical implementation in times of peace and rapid expansion in emergencies. Those abuses were largely avoided in the final stages of the past emergency. Sound and aggressive administration by responsible governmental medical authorities must be continued in order to avoid relapses. Inasmuch as the major part of those problems involves psychiatry and inasmuch as those errors and abuses were largely avoided in the later stages of the past emergency by full utilization of all psychiatric talent in the Army—fulminated by the Chief Consultant and other consultants in psychiatry fortified then by ripe experience—it appears axiomatic that sound aggressive administration by responsible medical authorities must continue to emphasize sound psychiatric

training in the Army and to utilize to the fullest extent the advice and assistance of civilian psychiatrists so that we will not again be caught unprepared. There are *now* in civilian life an adequate number of militarily experienced psychiatrists to meet any near term emergency requirement. The accomplishments of the department of medicine and surgery of the Veterans Administration in those associated fields of requirement since the war have been so superior I am sure the other governmental medical services will not fail to meet the challenge.

(3) In attempting to meet the problems of converting to adequacy in civilian life or to usefulness in the armed services the weaker ones in our midst, I feel sure we know where we want to go but do we know how to get there? Are we capable of effecting a coordination of effort and of setting up an organization to achieve our purpose? However good for the soul criticism of the errors embodied in those problems might be, I think the greatest good will come from using them merely as a starting point in discussing the responsibilities of the Army and this Association in connection therewith. Cooperative study should clarify the proper position of psychiatry in the military organization of the present and future and suggest how the civilian psychiatrist may better prepare himself to meet the responsibilities that are or may be placed upon him.

In looking to the future we must credit the past with its accomplishments. We must not fail to express recognition of the fact that the War Department has always been cognizant of its responsibility to maintain for army officers an adequate educational system with emphasis on instruction in leadership. Progressive instruction, particularly during the period between World War I and World War II in the educational institutions of the armed services, produced in the latter war a group of leaders, who in accomplishment, integrity, and selfless devotion to duty are numbered among America's greatest. It would be an unpardonable oversight also if we failed to give recognition to the splendid achievements resulting from the contributions to the armed services made by members of this association, whose faces I see before me, and to the contributions of



Dr. Howard Rusk and associated leaders in pioneering and expanding the convalescent and rehabilitation programs. Those influences not only had a profound effect in assisting with the assimilation into the services of the "inadaptables" and in the treatment and restoration to health of the psychiatric casualties of this recent war but also acted as a stimulating and motivating force in education in the psychology of military leadership.

That the Regular Army is alert and readily accepts and converts to practical use such influences and such contributions is evidenced by the fact that reverberations are noticeable even in the cradle of the military educational system. The Department of Military History, Economics and Government at the United States Military Academy has recently been designated as the Department of the Social Sciences and the title of the professorship has been changed to the Professor of the Social Sciences. All cadets now receive training in the psychology of military leadership under the direction of thoroughly indoctrinated instructors with the guidance and assistance of a doctor of psychology. This training in the current program is begun in the second year of cadet instruction and culminates in the cadets' final year at the Academy in a 40-hour course of very practical applied psychology. It is planned to increase the number of hours to 90 in next year's curriculum for the graduating class. After receiving their commissions as officers, graduates of the Academy progress to a 3-months course in training at Fort Riley, where instruction in the psychology of military leadership is continued. Again in the schools of basic training of the arms and services progressive courses in this subject are pursued. On and on into the schools of higher education in the military instructional program this all-important subject in an army officer's career projects itself. In the implementation of that system it would seem appropriate for the Surgeon General to use his trained psychiatric personnel and the services of eminent psychiatric consultants in visits to those schools for the purpose of advising the responsible heads and coordinators thereof as to methodology. Continued alertness on the

part of all should perpetuate the excellence of the current army educational system so that, should officers again be found wanting in leadership, imperfect conversion from civilian status to that of a commissioned or noncommissioned officer, the result of lack of time in an emergency for adequate training, will again be the major cause.

The facts cited indicate that the Army is battling to meet *its* responsibilities in the part of the task imposed upon it, however the task of effecting the necessary changes in human understanding and behavior in the everyday life of our citizens, young and old, to make possible the achievement of a more complete purpose envisages an educational revolution. A revolution of this type would be for the good not only of America but the good of the whole world. General Eisenhower recently, in this city, stated, "Air transport achievements will mean mutual destruction in any future war," and asked "the entire world to gain effective control of the causes that beget war." Until and even though an effective control of causes of war is ultimately begotten and developed we will need for the welfare of America the revolution to which I have alluded. All revolutions have had strong motivating causes and if successful have been developed on sound plans of policy and program. The blindest cannot fail to appreciate that the motivating causes for such a revolution are present today. Sound plans have been developed and beginnings have been made in implementing some of the policies and programs envisaged.

Beginnings have been made in civilian life and very certainly a beginning is proceeding most successfully at the Universal Military Training Center at Fort Knox. The trial unit at that post has demonstrated that military training can be conducted in a manner that has silenced practically all criticism and has earned enthusiastically expressed commendation for that training. It is essential to note that only 5% of that training is purely military, yet it is sufficient for its purpose, and that 95% constitutes splendid training in civics. The chaplains associated with this project are so impressed by results accomplished in the spiritual and moral spheres of that training that with starry-

eyed enthusiasm they discuss these results with visitors. They comment upon the facts that only one case of venereal disease has been contracted among the 640 trainees; that there have been large numbers baptized in the Catholic and in the many Protestant faiths; and that these young men demonstrate by their daily conduct that they have developed a sound appreciation of their responsibilities to their country as well as an understanding of what is represented in their country's obligations and service to them.

In this work there has been established a beginning in the Army of the type of revolution to which I refer and this beginning will have far-reaching effects in civilian life. The influences of those altered and improved attitudes regarding the *responsibilities of citizenship* will be disseminated into the hundreds of communities to which those youngsters return. I realize that to many Americans, universal military training represents conscription which in times of peace is repugnant to them. To those objectors, universal military training represents discipline and discipline is pictured as enforcement of obedience by the rule of the rod, the whip, and the sergeant's loud and profane command. But that is not the way that obedience and loyal service are engendered in the training program at Fort Knox. There obedience and service is taught as a two-way street, extending from every good citizen to his government and therefore reflected in acts of good government toward her citizens. I do not concur with those who classify those trainees as conscripts nor do I believe that such classification by detractors can measurably decrease the benefits to those young men of the training which they receive in nonmilitary skills and that constitutes 95% of their training.

I believe it was proven in the last war that hundreds of thousands of apparently acceptable men were able to avoid serving their country even though the national se-

curity was critically threatened because of manifesting symptoms indicative of disabling situational reactions or personality disorders. That fact forces upon one the conclusion that a radical change in education in the obligations of citizenship is imperative. Public opinion must be educated to appreciate that such a condition represents a cancer in our social body and constitutes the necessity for an educational revolution. The Atomic Age presents prospects which increase the pressure of this necessity. We may never again need large "standing armies" but our country will reap untold rewards in peace and in war from education in the obligations of citizenship such as that now being taught in the provisional universal military training battalion at Fort Knox.

The above comments may be waived aside as syllogistic reasoning which is not enlightening but deceiving. However, to me the conclusions presented appear to be inevitable deductions. If we are to build a nation prepared to meet atomic warfare we must build a nation capable of the total useful mobilization of its citizenry. Therefore, preparation, through education, by development of the characteristics commented upon is mandatory. The movements now begun must, I feel, be multiplied and magnified.

And now, gentlemen, although I stated as a premise that we know where we want to go and asked the question do we know how to get there, I feel reasonably certain that a review of the problems and corrections suggested points up the requirement. It is a necessity that the armed forces maintain such close relationship with the militarily experienced psychiatrists and with all of you in this association that all major problems in the sphere of the social sciences will continue to be studied in an atmosphere of mutual understanding. The best possible accomplishments for the welfare and security of our country should thereby be consummated.

## PSYCHIATRIC ASPECTS OF WOMEN SERVING IN THE ARMY<sup>1</sup>

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In considering the psychiatric aspects of women serving in the Army, it must be recognized at the outset that there are at least two rather different groups which have distinctive characteristics, namely, the professional women, of whom the nurses are the largest component, and the essentially non-professional group, the Women's Army Corps. The professional category, including physiotherapists and dieticians, but omitting doctors, is a more or less homogeneous group. The WACS, however, are composed of heterogeneous elements who merge in a composite picture because of their community of interest.

Both of the major divisions have three fundamental characteristics in common which differentiate their psychiatric problems from those of men. Two of these factors were inherent in the army organization, namely, that women were volunteers and noncombatants. The other is simply that they were women. The influence of these basic conditions on the two groups and their differences and similarities will be discussed briefly.

The professional group, as typified by the nurses, presented less complex problems in many ways. They were motivated largely by patriotism to carry on a critically needed job for which they alone were specifically qualified. They were in work traditional for women and so were not in competition with men. They were previously selected by their hospital training, they had a common educational background, and they continued in an occupational field to which they were accustomed. Their environment was a relatively protected one in which there was the usual hospital discipline and the maternal attitude of their superiors and of the doctors. And finally, probably most important of all, they were supplying a service which gratified the passive needs of men, and which identified these women with the mother, the wife, or the sweetheart back home.

As a consequence of these conditions, nurses were less able to assume the military rôle of officers when given real rank. They were still dependent in many matters affecting their living conditions. Although some of them resented this protective attitude, most were incapable of assuming the responsibility required of commissioned officers. This was the result of their hospital training, and did not in any way detract from their professional skill and usefulness, but rather adapted them better for coordinated teamwork. It tended to make them more welcome and less threatening to their male associates than were their sisters in the service.

The WACS, on the other hand, suffered from, and yet also profited by, their greater diversity in social and educational endowment. They were a cross section of American womanhood coming from the farm and from the factory, from the office and from the home.

Their motivations were almost as divergent as their backgrounds. Some there were who volunteered for purely patriotic reasons, and at considerable sacrifice of their own position and comfort. For many, however, this ideal was mixed in varying proportions with other more personal reasons, or was completely overshadowed by them. Some were influenced by a general masculine identification; others were substituting for a husband, brother, or father who was dead or disabled; and others were competing with those who were living. Individuals so impelled were usually fairly stable and their motivation was sufficiently sincere to carry them through their army experience. Another group enlisted in the hope of meeting more men, or for the glamour and excitement. Many of these were immature women whose enthusiasm could not stand up to the hard reality of discipline and the monotony of army life. Then there were the escapist who were running away from either external or internal conflicts in their environment. These included those who wanted relief from too rigid, or otherwise intolerable, home situations; those who were seeking substitutes

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

for disappointment in love or marriage, and those who had always been maladjusted and were looking for that green field which never comes nearer. Many of the neurotics were in this group, and most were unable to make any better adjustment than previously. They were responsible for numerous company problems and disability discharges. Some, however, did find in the orderly, disciplined routine of army life the support and leadership which they had needed, and became happy and useful members of the organization. Another motivation for a large group was a desire for occupational change. This was beneficial to the relatively untrained because they were given opportunities to learn new skills or become proficient in unfamiliar techniques. Those seeking merely a change of occupation because of boredom frequently were disappointed to find themselves doing the same cooking or stenographic work that they were trying to avoid. Sometimes this work was on a more menial level than their former civilian job so that the frustration was intensified.

These then are some of the reasons which motivated women to volunteer for service. By the very fact of their own free choice, there was a self-selection of the applicants; they were therefore less typical of American women than were the men drafted by selective service. This difference was reflected in rejection rates, as shown in a 6-months period in 1944. Out of every 5 WAC candidates disqualified for medical reasons there was approximately one rejection for neuropsychiatric conditions. At the same time the ratio for men was 2 out of 5.

Other elements also entered into this discrepancy, chief of which was the inadequacy of the examination given to women. The cause of this was primarily the recruiting policy which, based on a volunteer system, was directed toward meeting a quota. Quantity was stressed rather than quality. In spite of repeated recommendations by the medical department for better psychiatric screening, most of the WAC recruiting was over before a partially adequate program was adopted. This procedure proved effective in the short time of its operation. Re-

jection rates increased and disability discharges decreased.

But, even with good psychiatric examinations, the proper selection of candidates was more difficult than with men. Women volunteers tried to conceal disabilities, whereas the reverse was often true with men selectees. Also there was less past experience on which to base standards for selection of those women who would have the emotional capacity to adapt to regimentation.

Of the many factors that affected psychiatric suitability for the WACS it soon became apparent that one of the greatest hazards was age. WACS were accepted between the ages of 20 and 50. NP rejection rates were almost twice as high in those over 40 as in the 20 to 24 age group, and the discharge rate within the first 6 months of service showed a similar trend. Because of this the Surgeon General urged an upper limit of 38, but this advice was not followed until after VE day. The age factor was especially important overseas. The incidence of medical evacuations particularly for psychoneuroses, was highest in the older age bracket. It was the opinion of many medical officers that, with few exceptions, women over 35 should not be sent overseas.

The problem of selection was intimately associated with that of utilization of the WAC. Here again the situation was complicated by its volunteer aspect, and by other difficulties not present for either nurses or men. These conditions led directly to psychiatric disturbances.

For the nurses, there was never any question of the importance of the individual's job. For the WAC, particularly in the early days, there was frequently serious doubt in her own mind and in those of her associates. She was unhappy because she compared the usefulness of her army job with what she might otherwise have been contributing to the war effort in civilian life. It took the Army a long time to learn how to use the WACS effectively, but they finally proved their value so well that the demand for their services far exceeded the supply, both in this country and overseas.

WACS were more difficult to place than men, because all women's assignments were to jobs in which training, special aptitudes,

or qualifications were required. There were no all-drudgery jobs such as continuous KP or orderly work, nor could the untrained be absorbed in the great groups of undifferentiated GI combat troops. Women thus came in direct competition with men for skilled jobs and actually replaced them. This was one of the greatest causes of friction and jealousy from men. Soldiers so replaced and sent to combat duty naturally resented it, and their hostility was directed toward the WAC rather than toward the less tangible military necessity.

Mal-assignment was probably the greatest cause of psychiatric breakdowns among women. They were willing to put up with any kind of hardships in the way of housing and lack of recreation, if their jobs were satisfying. If their work was in accordance with their training and if there was enough to keep them busy, sick call was at a minimum. This was clearly demonstrated in an extensive study, on fatigue among 5,000 WACS, from which I quote: "From the various factors considered, it was apparent that the incidence of fatigue was influenced more by psychological than physical factors. Interest in the job outweighed all other single factors in importance."

Now to return to that last differential factor: the woman, regardless of her branch of service. In general, it may be said that army life tended to emphasize femininity rather than masculinity in women. So much of the latter was forced on them that they over-reacted in the opposite direction.

Two conditions which were serious problems with men were negligible for women. Enuresis was almost never found. Why there is so much sex difference in this symptom has not been satisfactorily explained. Also homosexuality was much less of a problem than was expected. It was anticipated that military life might attract overt homosexuals, but this was true only to a very limited extent. When they were found, they created a more difficult situation than with men, but too frequently a worse problem was that of false rumors and witch hunting. Any girl with marked masculine tendencies or any two girls with close friendships were under suspicion and were practically con-

victed by a whispering campaign, with little opportunity to defend themselves.

A condition peculiar, of course, to women, was pregnancy. This increased in the military service as it did in civilian life, but there were a few additional reasons for its occurrence in the Army. Here was the greatest number of young women closely associated with a group of men in tension-charged situations. The inevitable result was frequent marriages. These women were willing to forego pregnancy for a short period of time, but as the war dragged on many became increasingly impatient to start a family. Some also used pregnancy as an excuse for return from overseas or for discharge. Others, as in civilian life, were swept away by strong emotions, especially under the added stress of overseas life. Discharges for pregnancy were more frequent than for all other medical conditions combined, but there was no differentiation between those within or those without wedlock. It is my conviction, however, that the incidence of illegitimate pregnancies and of abortions among military women was lower than in a comparable civilian group. Those that did occur were more conspicuous because there was less opportunity for evasion in military channels, and one pregnant woman in uniform was more obvious than 10 similar civilians.

Most of the other differences peculiar to women as contrasted to men in military service are related either to inherent or acquired feminine characteristics.

One of these is a more marked tendency towards individuality rather than group activity. Regimentation and discipline were difficult for women because of their previous experience and mode of life. Women working in the home are their own bosses, and even those working in offices are inclined to give only lip service to "the Boss." Also they are much more independent in matters of social conformity, particularly in regard to clothes. Women conform to fashion trends, but each individual has to be different and give her own interpretation of the styles whereas a man is very unhappy if he varies from the uniformity of the group. Feminine modifications of the military uniform were further influenced by the desire for adorn-

ment, as demonstrated by corsages of flowers and pigtailed tied with ribbons. The latter additions were more prevalent overseas where a longing for beauty in the midst of war was especially acute.

Women placed much greater emphasis on keeping up personal appearances. Even under very adverse conditions, as in New Guinea where slacks were worn constantly, the women washed their clothes in cold water and ironed them meticulously, while the men wore theirs rough dried. Hair dressing, too, was a not-forgotten ritual. It was a great morale factor both for the women themselves and for the men who saw them. Beauty parlors were arranged with much ingenuity in the most unlikely situations. There was one in the middle of Burma, set up under a teakwood tree with only a bucket of cold water for equipment, but with an operator from Charles of the Ritz, then temporarily a private in the engineers.

Another manifestation of femininity was the universal practice by women of decorating their living quarters. They were clever in finding local material such as parachutes for making bed covers or curtains, and so-called "moonlight requisitions" were sources of supply for material to make furniture.

Eating habits also showed a feminine attitude. WAC messes with the regular GI rations always had better cooked and more attractively served food because the women demanded it. The palatability and attractiveness of food meant so much to them that they sometimes refused to eat adequately in combined messes where the esthetic element was neglected. This attitude occasionally became pathological, resulting in loss of weight or severe anemia.

One great hardship for women was the lack of privacy in the army. Throughout their lives, they are trained to regard this privilege highly. The crowded dormitory and the community shower room and latrine were really traumatic for many. Overseas this situation was a definite factor in increasing tension and precipitating psychoneuroses, especially after a year or more under such conditions.

The social life of women in the army presented many complications peculiar to the service. Women of various strata were

thrown together intimately in a way which is much less common to them than to men. Class differences are customarily maintained by women, and the necessity to break these down and adapt to the leveling effect of the Army was usually difficult for them.

Their social contacts with men were abnormal because of rank distinctions. For example, nurses were frequently more congenial with the younger enlisted men than with the older and usually married medical officers, and WAC enlisted women might find their contemporaries among the men officers. But fraternizing between officers and enlisted personnel was against military regulations. This became a serious problem in isolated areas, where with a scarcity of women, male officers tried to usurp all the female companionship regardless of rank.

The attitudes of many men, both in and out of service, that all women in uniform were "on the make" was disturbing to the majority of women who were not so motivated. That the sex standards of many women did change while in the Army cannot be disputed, but this exemplified a tendency not limited to military service. This modification was facilitated by absence from the home community. On the other hand, in the Army, there were definite restraints exercised by group opinion and lack of privacy.

Women in the service were in a minority group, especially overseas. This made even the least attractive popular. It was hard for some of them to keep their emotional balance and remember that circumstances rather than their own charms were responsible for waving the magic wand. The social pressure on these women by large numbers of lonesome men was terrific. Many methods from command attendance to extravagant inducements were used to secure their company. The tension of keeping up with work and too much social activity, as well as the stress of emotional conflict, was the cause of many psychiatric disturbances. The situations were particularly difficult among members of units long isolated together, who became very dependent on one another. Their previous and future lives were vague and unreal and only the present was of importance. It was viewed as an interlude in life and whatever made it more bearable seemed justi-

fiable. Men were apparently better able to partition off their lives so that they did not as readily become deeply or permanently involved emotionally. They were, therefore, less liable to lasting psychic trauma from transient attachments. Some of these associations have continued since the war, but the great majority were broken off, sometimes with tragic sequelæ, especially to the women involved.

Returning to civilian life has been difficult for both the professional group and the WACS. Nurses have been loth to return to their former type of service with longer hours, less pay, and more drudgery. The WACS have had their own peculiar problems of readjustment. They have missed many of those things which they learned to value in the Army, such as group comradeship and an interest in world affairs. They find themselves accorded little honor as

veterans, and their army training is discounted by prospective employers. Even more than men, these women have become unsuited to their former civilian environment because the change in their pattern of life was more radical. They are quite different persons from those who enlisted 4 or 5 years ago. Most of them have matured, have broader interests and a new and finer sense of values.

And now Congress has been asked to recognize the importance of women in military service by including them in the regular Army and Navy. If this is accomplished, with careful selection, good training, and proper assignments, many of the difficulties described above will be solved. But let it be hoped that if a future war demands a total effort, women will be drafted for all types of work so that the disadvantages of a volunteer military system may be avoided.

## A REVISION OF THE PSYCHIATRIC RATING SCALE<sup>1</sup>

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In a previous paper(1) we described a psychiatric rating scale and demonstrated its use as a method for quantitative recording of psychiatric clinical findings and the changes that occur in them during the course of the illness. It was pointed out that a recording method of this type was particularly essential in any scientific investigation, the purpose of which is to search for possible correlation between clinical symptoms and physiological or biochemical data. It was also found that when patients were rated with this scale by several psychiatrists there was a satisfactory correlation in scores so that independent determination by individual workers could be regarded as reliable. In a subsequent paper(2) the application of this scale in an investigation of a number of patients suffering from agitated depression was reported. It was found that it was possible to use this scale in correlating changes in the clinical picture produced by electric shock treatment with the concomitant neurophysiological and biochemical findings.

During the last 15 months, since the conclusion of the work reported in the above-mentioned papers, we have continued our studies on this rating scale, our main purpose being to render it a more adequate tool for evaluation of changes in the clinical picture and extend its applicability in research investigations. These studies have resulted in the correction of certain faults in the original scale, and we now present the revised scale and our experiences in the use of it. First however we would like to point out some of the more important changes that were made and the reasons for introducing them. In the first place it was important to establish a more adequate base line against which the deviations in the clinical picture of our patients could be compared. In our original

scale and also in scales that were proposed by other authors, the deviations in any of the functions recorded were measured in comparison with a hypothetical normal or average person. This obviously was not satisfactory since, as we all know, even in the average population these functions show fairly wide variations. When we consider the fact that mental disturbances frequently develop in people who even before the onset of their illness showed some peculiarity of behavior, it was obvious that a rigid standard could not be utilized since our evaluation of whether the patient's behavior was approaching a normal level could be determined only by comparing it with his own original behavior. It became obvious, therefore, that our base line would have to assume the character of a profile and that this profile could be made up only on the basis of the history of the patient's prepsychotic personality. Furthermore, it became apparent to us that the range of pathological variations in each one of the functions rated in our previous scale was not sufficient to allow for the fluctuations that were found to occur during the course of the disease and its treatment. Finally, the application of the rating scale to a larger number of patients and a greater variety of disease syndromes brought out the fact that certain functions included in the original scale were somewhat superfluous, whereas others were not receiving the attention that they should have. This has led us to revise the scale, introduce changes in its form and the manner of scoring, and check its validity on an adequate number of cases.

The scale in its present form is shown in Fig. 1. It consists of 19 items which can be divided into 3 major groups. The first 7 comprise behavior items that can be directly observed at the time when the patient is interviewed. The next 4 are functions which are also objectively observable, but an adequate evaluation of which depends upon continuous observations by ward per-

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

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sonnel during the 24 hours, and which can be reported to the psychiatrist who is rating the clinical picture. The third group comprises 8 functions which can be evaluated only on the basis of interview and communication with the patients themselves. It is obvious that the relative validity of the determination is different in these 3 groups, and that has to be taken into consideration in the rating of the patient's condition. In each one of these items we have in the center of the scale 2 columns of descriptions which

plished one has a reasonably accurate picture of the quantity and quality of his pathology and the response to treatment. The material used in determining the base line is largely historical, consisting of data obtained from the patient himself, his relatives, and others who have known him before he became ill. We are aware, of course, of the questionable validity of some of this information, whether it stems from lack of powers of observation or purposeful misinformation. To offset this we have tried to arrive at this base line by

## PSYCHIATRIC RATING SCALE

FUNCTION	6	5	4	3	2	1	BASE LINE		1	2	3	4	5	6
APPEARANCE	BIZARRE		DECORATIVE		OVER-METICULOUS		NEAT	CARELESS		SLOVENLY		INCONINENT (Quality)		SMEARING
MOTOR ACTIVITY	EXCITED		AGITATED		RESTLESS		ACTIVE	QUIET		UNDERACTIVE		RETARDED		STUPOROUS
RESPONSIVITY	STICKY		OVER-DEPENDENT		SUGGESTIBLE		FLEXIBLE	RIGID		STUBBORN		RESISTIVE		NEGATIVISTIC
AGGRESSIVENESS	DESTRUCTIVE		COMBATIVE		BELLIGERENT		DOMINATING	SELF-EFFACING		SELF-DEPRECATING		SELF-MUTILATIVE		SUICIDAL
SOCIALIZATION	UNRESTRAINED		MEDDLESOME		OUT-REACHING		EXTRAVERTED	INTROVERTED		SHUT-IN		ISOLATED		INACCESSIBLE
ATTENTION	UNCONTROLLED SCATTER		MARKEDLY DISTRACTIBLE		MODERATELY DISTRACTIBLE		ALERT	DETACHED		PREOCCUPIED		DISPARATIVE		COMPLETELY WITHDRAWN
SPEECH	INCESSANTLY PRODUCTIVE		PUSH OF SPEECH		OVER-TALKATIVE		VOLUBLE	TERSE		UNDER-TALKATIVE		RETARDED-UNCOMMUNICATIVE		MUTE
NUTRITION	OMNIPHAGIC		VORACIOUS		GLUTTONOUS		INDULGENT	FINICKY		ANOREXIA		REFUSAL		TUBE-FED
SEXUALITY	SEXUALLY ASSAULTIVE		SEXUALLY SOLICITING		SEXUALLY OVERACTIVE		ACTIVE (HETERO SEX)	UNDERACTIVE (HETERO SEX)		HOMOSEXUAL PASSIVE		HOMOSEX SOLICIT		HOMOSEX ASSAULT OPEN MASTURB
SLEEP	SEVERE INSOMNIA		MODERATE INSOMNIA		RESTLESS SLEEP		LIGHT	HEAVY		SOMNOLENT		LETHARGIC		COMATOSE
WORK	DISRUPTIVE		SCATTERED		OVERACTIVE		EAGER	INDIFFERENT		DISINTERESTED		RESISTIVE		INCAPACITATED (PSYCHIATRICALY)
MOOD	EXHILARATED		EUPHORIC		ENTHUSIASTIC		OPTIMISTIC	PESSIMISTIC		SOMBER		DESPONDENT		DEEPLY DEPRESSED
AFFECT	SPONTANEOUS OUTBURSTS		EXPLOSIVELY REACTIVE		LABILE		DEMONSTRATIVE	RESERVED		INADEQUATE		BLAND		INAPPROPRIATE
FEELING	PANIC		ANXIETY-GUILT		TENSE-IRRITABLE		HYPERSENSITIVE	HYPOSENSITIVE		PHLEGMATIC		DULL		APATHETIC
AWARENESS	CONFUSED		SCATTERED DISORIENTED		SUPERFICIAL		DIFFUSE	RESTRICTED		DEPERSONALIZATION		CLOUDY		UNCONSCIOUS
ASSOCIATIONS	IRRELEVANT		FLIGHT		TANGENTIAL		CIRCUMSTANTIAL	CONCISE		BRIEF		IMPOVERISHED		BLOCKED
CONTENT	HALLUCINATED DELUCED		IDEAS OF REFERENCE		AUTISM		PROJECTIVE	INTROSPECTIVE		SELF-OBSERVING		CONVERSIONS HYPOCHONDRIASIS		OBSESSIONS PHOBIAS
MEMORY	CONFABULATION		FABRICATION		OBSESSIVELY REMINISCENT		DETAILED	GENERALIZED		MILDLY DEFECTIVE		SEVERELY DEFECTIVE		AMNESIA
THOUGHT PROCESSES	FRAGMENTED		ALLOGICAL		LOOSE		SHALLOW	CRITICAL		RATIONALIZATION		OBSESSIVE HAIR-SPLITTING		OBSESSIVE DOUBT

FIG. 1.

are tabulated under the title of *base line*. The two terms at the base line of each one of the items represent the usual variations in the particular function within normal limits. Thus, for instance, in the case of the *appearance* of the individual we may have some persons who are originally either "neat" or "careless." In the case of the *motor activity* some people may originally be "active" or "quiet" and so on throughout the 19 items. The base line, when completed, provides us with a personality profile of that patient as he was before the onset of the illness. When serial determinations of his deviations from this base line are accom-

plished one has a reasonably accurate picture of the quantity and quality of his pathology and the response to treatment. The material used in determining the base line is largely historical, consisting of data obtained from the patient himself, his relatives, and others who have known him before he became ill. We are aware, of course, of the questionable validity of some of this information, whether it stems from lack of powers of observation or purposeful misinformation. To offset this we have tried to arrive at this base line by

on both sides of the base line we have indicated the range of deviations in terms of

progressive degrees of pathology. Both the base line variations and their pathological exaggerations were divided on the basis of their direction into 2 groups. On the left-hand side we have placed those which are directed away from the person and towards the outside (centrifugal). To the right of the midline we have the opposite, namely, centripetal or internally directed forms of behavior. These deviations both to the right and the left from the base line have in the case of most of the items been expressed in terms of 3 degrees of severity of involvement. Wherever possible, the terms used in preparing the rating scale were taken from the vocabulary that is currently employed in psychiatric clinical description. All of us who have been working in this field for some time will readily appreciate how difficult it is to develop a uniform system of describing human behavior particularly in its pathological forms. Some terms have even come to represent entirely different meanings when used by proponents of special schools. In the case of a rating scale of this type, therefore, it will be essential to state definitely what meaning these particular terms are intended to represent. It was surprising, however, and gratifying to find that in the larger proportion of the terms this difficulty was not encountered.

### SCORING

At the present time only a raw score is derived from the rating scale. Problems of weighting are being deferred until a much larger mass of data is available. Our statistics and cases show that the scale is sufficiently sensitive to permit use of the raw score alone to evaluate the status of the large majority of patients. One must visualize the scoring sheet as a grid overlying the scale. The words of the scale now become guides in estimating the degree of deviation from the base line. In actual practice the scorer will have both tables before him and as he prepares to rate each category will refer to the verbal scale to assist him in placing his check mark on the proper side of the scale and in the square most accurately measuring the degree of deviation from the base line.

Fig. 2, which is a single rating of an actual case of catatonic schizophrenia, illustrates the recording and scoring method. All scores are determined by the difference between the base point and the checked point on the grid. The smallest unit difference used is one-half. Note, for instance, the following items.

*Appearance.*—The check point is in column one, but the base line point is to the

RATING SCALE

Score Sheet No. 1

CATEGORY	6	5	4	3	2	1	BASE LINE	1	2	3	4	5	6	SCORE
APPEARANCE						X		✓						2
MOTOR ACTIVITY						✓	X							2
RESPONSIVITY							X		✓					2
AGGRESSIVENESS						✓	X							2
SOCIALIZATION							X			✓				3
ATTENTION							X			✓				3
SPEECH					✓		X							4
NUTRITION							X							$\frac{1}{2}$
SEXUALITY							X					✓		5
SLEEP						✓	X							1
WORK							X					✓		6
MOOD							✓	X						1
AFFECT							X						✓	6
FEELING					✓		X							3
AWARENESS							X		✓					2
ASSOCIATIONS	✓						X							$6\frac{1}{2}$
CONTENT	✓						X							7
MEMORY							X	✓						1
THOUGHT PROCESSES	✓						X							7
TOTAL														64

Patient: E. J.  
 Doctor: S. L. S.  
 Date: 3/2/47

FIG. 2.

left of midline. The score is therefore 2, derived by counting the squares from the base point to and including the check point.

*Nutrition.*—In this case the check point falls on the middle of the base line column. It is not a full square from the base point and therefore since the smallest scoring increment used is  $\frac{1}{2}$  that is the score.

*Associations.*—From the base point to the check point one counts  $6\frac{1}{2}$  squares and the score is  $6\frac{1}{2}$ .

There will be times when the scorer feels that in a certain category the patient shows

pathology ratable on both sides of the base line. In that case he places checks on both sides and derives his score from the side giving the greater difference.

When a score for each category has been obtained a total score is then derived by simple addition.

As the treatment proceeds and a series of ratings are obtained the check marks begin to approach the base line and obviously the total score decreases also; in that way a quantitative measure of the patient's day-by-day behavior is secured. In most cases the rating is carried out about once a week since the changes are slow enough in developing. Where the picture changes more rapidly, obviously the rating will have to be done more frequently too. A master chart is provided in the record of the patient in which the total scores are entered in the same manner as for instance his temperature, pulse and respiration. At the end of a month or 2 months we will have, therefore, a record showing whether the patient's condition is at a standstill or whether it changes toward the better or worse and which functions yield to, or resist, treatment.

As was stated in the original publication, the rating scale is not intended to replace the usual clinical notes. Descriptions of the person's clinical picture are made at regular intervals and entered into the record. It is obvious, therefore, that in testing the validity and usefulness of this rating scale, two important considerations have to be kept in mind. First, to what extent does the rating scale correlate with the general descriptive notes on the patient's behavior? Secondly, how well will the ratings of 2 or more psychiatrists correlate with one another? To study these we have instituted a procedure in which 6 pairs of psychiatrists did serial ratings on a total of 26 patients. These patients were all undergoing different types of treatment, such as electric shock, insulin, and lobotomy. At certain stated times, each patient was interviewed jointly by a pair of psychiatrists but rated independently. Throughout the progress of rating of each patient neither one of the psychiatrists knew what the rating of the other one was nor did they refer to their own last rating of the patient. At the end of the rating they would

hand the score sheets over to the secretary for computation. This computation was actually made at the end of the study.

One hundred such paired determinations were completed, and the results of all these findings are shown in Fig. 3. Each dot on the chart represents one pair of ratings done on the same patient by 2 psychiatrists. The figures along the ordinates represent the scoring of one of the physicians and those along the abscissa the scoring of the other. The middle of the three diagonal lines represents the points where all of these ratings would line up if the correlation were perfect. It can be seen that the correlation is remark-

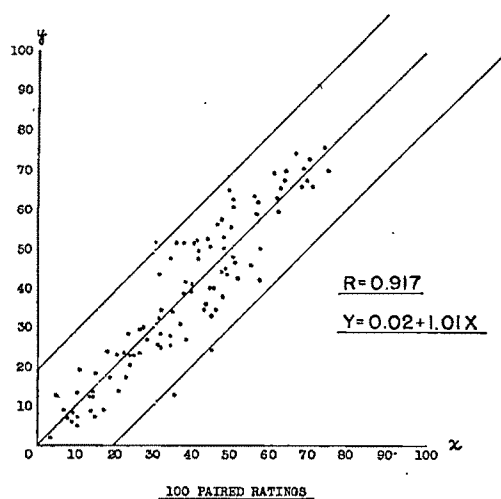


FIG. 3.

ably good; the statistical computations of this correlation are represented on the chart on the right-hand side. Correlation coefficients for individual pairs of physicians are not presented but all were high, and from the chart it is obvious that the variation would be small.

Figs. 4, 5, and 6 show the correlation on single cases rated over a period of time by 2 psychiatrists. In Fig. 4, we have these paired ratings of patient R. W., who was treated by lobotomy.

He is a 25-year-old single man admitted to the hospital in May, 1942 with the symptoms of tension, apprehension, preoccupation with religious ideas, and feelings of guilt and sinfulness. This led to the development finally of a typical picture of catatonic schizophrenia. At that time he received metrazol treatment, showed a good remission, and

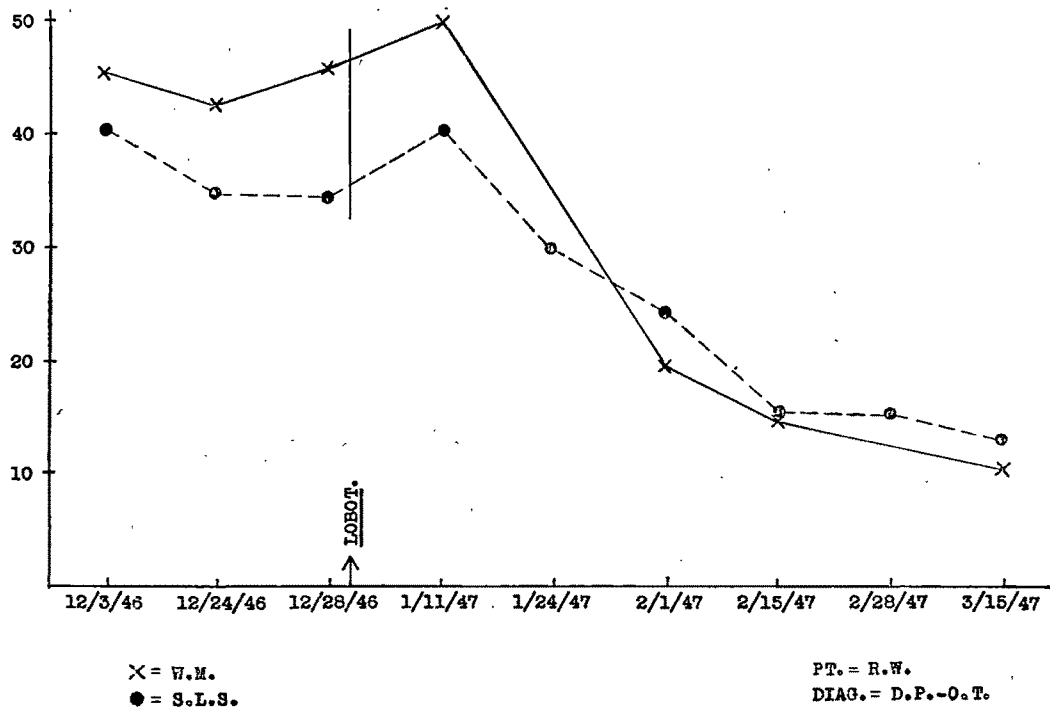


FIG. 4.

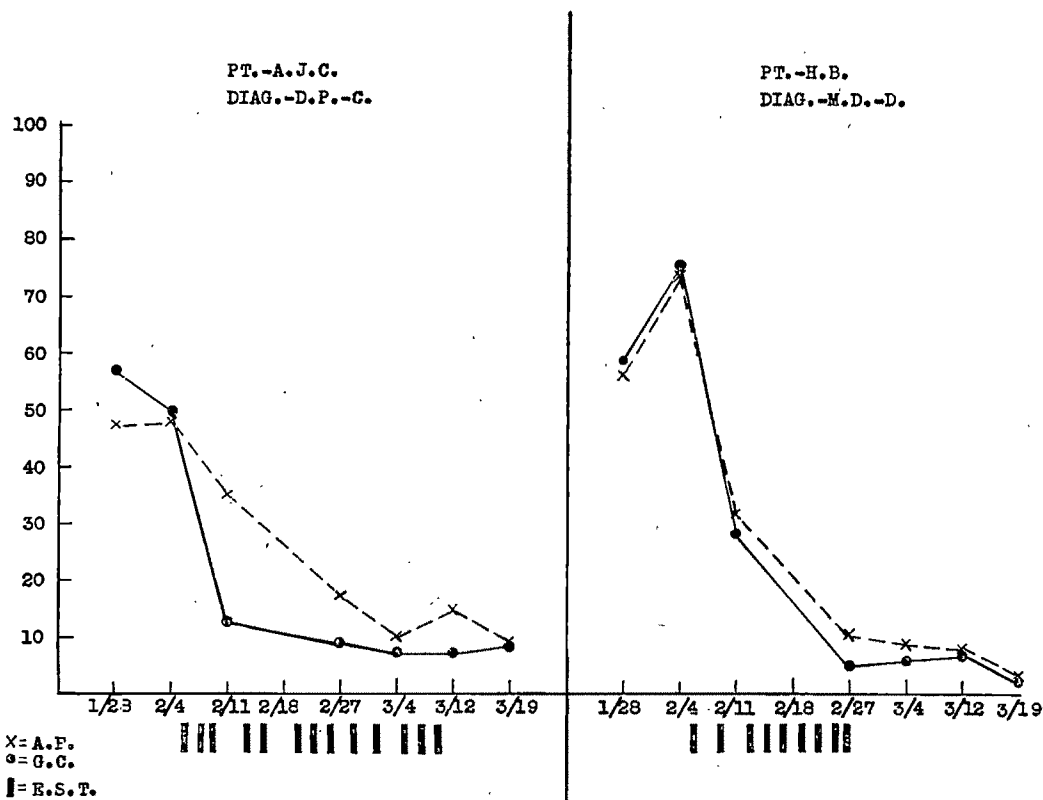


FIG. 5.

FIG. 6.

was discharged in July, 1943. In March, 1946 he was readmitted with symptoms much like those on the first admission but to which were added marked obsessive doubt and an inability to come to decisions. This time he was treated with insulin and improved fairly rapidly, but before it was possible to release him he suffered a relapse. In December, 1946, a lobotomy was performed, and at the present time he shows great improvement and is being considered for a visit to his home. The ratings were started about 4 weeks before the performance of the lobotomy when the symptoms of his present attack were at a high level of severity. The ratings were done by 2 psychiatrists simultaneously but independently. The crosses represent individual ratings by Dr. W. M. and the dots ratings by Dr. S. L. S. Nine separate ratings were carried out, and the lobotomy was performed after the third of these. Some time after that he began to improve as can be seen in Fig. 4. There is, of course, some divergence between the 2 sets of ratings, these being more marked at the time when the patient was at his worst, and they seem to be approaching each other more closely as he improves. The general trend, however, is very definitely the same, and it can be seen that either one of these 2 ratings would give an adequate idea of the change in the clinical picture as it was produced by the treatment.

Fig. 5 shows another set of paired ratings in which 7 separate ratings were undertaken by the 2 psychiatrists.

This was the case of A. J. C., a 28-year-old white male, who was admitted on January 19, 1947, with tension, agitation, autistic thinking, disturbances in associations, and auditory hallucinations. During the period between February 5 and March 10 this patient received 13 electroshock convulsions with very good results. At present, there is still some affective blunting and vagueness of associations, but his adjustment is good and an early visit out of the hospital is being arranged. The correlations between the 2 sets of ratings again show occasionally some divergence, but the trend is the same and the general results in this case are much like those in the preceding figure.

Finally, in Fig. 6, we have presented a similar set of paired ratings in a patient suffering from manic-depressive psychosis, depressive type.

This patient, H. B., a 58-year-old white male was admitted January 4, 1947, with depression, retardation, delusions of reference and persecution, and feelings of guilt. There is a history of similar episodes in previous years and other episodes of distinctly manic behavior. This patient received a course of 9 electroshock convulsions during the period from February 5 to February 26 with excellent results. At the present time he is out of the hospital on visit. The correlation here between the ratings of the 2 psychiatrists is so good as

almost to coincide at practically every point. It is obvious that this patient's symptoms were much more clearly defined and more easily observable; this is probably the reason why the correlation is so close. The trend, of course, is the same with both psychiatrists, and the correlations of this curve as well as the ones in the previously shown figures with the reports described in the clinical notes is excellent.

#### COMMENTS

The results obtained with our revised rating scale are definitely superior to those that we had in our previous report. The reasons are fairly obvious. The introduction of the new base line and the opportunity afforded by this to compare the patient's pathological condition with his own prepsychotic personality would tend to give a more adequate picture of the fluctuations in the clinical course as they were conditioned by the disease or the treatment. Furthermore, the wider range of deviations in individual functions affords a better opportunity to describe the actual findings and come nearer to a consensus than was true of the rather narrow limits within which we had to work with our previous scale. Finally, the deletion of some functions which led to overlapping and the insertion of others which are of importance in sizing up the patient's condition at any given time helped to render the description more accurate. The adequacy of the correlations of ratings done by different physicians is obvious from the figures presented. We should like to add here that experience alone, either with this scale or psychiatry in general, did not seem to play too much of a rôle. One of the authors (W. M.) has worked with both the original and revised scales; otherwise, the psychiatrists who collaborated in formulating and checking the previous scale were not associated with the present study. The range of psychiatric experience of the physicians rating these patients varied between one year and 25 years. We did not find that experience alone played any important rôle in the degree of correlation.

As we have worked along with this method we have been, and still are, cognizant of certain shortcomings and pitfalls, some of which we have tried to take care of and others which, so far, have not been corrected. There is, for instance, the problem

of "weighing" of the different symptoms as regards their importance. Thus, it is obvious that in patients suffering from schizophrenia certain symptoms are much more important in the evaluation of the maladjustment than others. It may be that in the future and after experience with a greater number of patients we shall find that such a differentiation and appropriate weighing will become possible. This difficulty, however, is not quite as important as it may seem. After all, we are not using this scale as an absolute measurement of the patient's inability to adjust. Furthermore, we are not comparing one patient with another on the basis of this scale but are comparing one patient's symptoms with his own at some other stage of his disease and comparing all of them with what we consider to have been his own pre-psychotic personality. In that case, it does not matter whether the patient has deviations in one function or in all of them. It is important to decide how much of that deviation there is and how it is affected during the course of his illness and the treatment of it.

Another difficulty that is closely related to the one mentioned above is presented in the fact that, in such complex functions as are those that we are recording, it is not possible to determine the exact numerical value to be attached to single deviations in each one of these functions or in the comparison of such deviations in 2 different functions. For instance, in the case of responsivity, 2 points are allotted for stubbornness and 2 for resistiveness. Similarly, in the case of attention, 2 points are allotted to preoccupation and 2 to disparities. Obviously, we have no way of measuring or weighing the exact difference between stubbornness and resistiveness nor do we have any way of definitely determining the exact relationship between stubbornness and resistiveness on the one hand, preoccupation and disparities on the other. So far as we can see at this time, no way is available for such exact determination. We do know, however, that the person who is merely preoccupied but can be made to pay attention by persistence on the part of the examiner is definitely less

seriously sick than the schizophrenic who shows gaps and disparities in his attention. Furthermore, in regard to a number of these functions, we can actually see how the patient, when he begins to improve and come back to his own normal functioning, successively passes through the various steps in his pathological symptoms.

It must also be mentioned that this rating scale was intended primarily for use in working with the type of clinical syndromes that are found in state hospitals. It does not lend itself as well for use, for instance, with patients suffering from psychosomatic disorders, psychoneuroses, or some of the behavior disturbances. Other rating scales utilizing different functions and their deviations will have to be devised for such problems. We wish also to stress the point that this rating scale has never been intended to displace the elaborate descriptive clinical notes which we are still using in working with our patients. At no time would we consider a rating scale to be adequate for the presentation of the patient's condition in such a way that it would give an adequate picture of the individual functioning as a whole. These notes, however, as we have pointed out in our first paper, do not lend themselves for use in quantitative recording that can be correlated with similar recordings of physiological and biochemical findings. For such correlation, a rating scale like the one we present or some other that may be more adequate but would work along the same principles is practically indispensable. Finally, we recognize that our descriptive terms may be subject to criticism on semantic or other grounds. We wish to emphasize that they are merely aids to locating the point which determines our estimate of the quantity and direction of the pathology.

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## PREVENTIVE PSYCHIATRY<sup>1</sup>

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Prevention is always the best therapy. Levees to hold back the flood waters; traffic lights and road markings to reduce the number of accidents; a U. N. to outlaw war; vaccination against smallpox; pasteurization of milk; they all pay high dividends in the saving of money, time, energy and suffering. Such savings are greatest whenever and wherever it is possible not only to protect *against* but to eliminate the very source of the ills. Nowhere else is the need for such prevention more urgent than in the field of psychiatric disorders; and nowhere else are the rewards more gratifying.

Today over  $\frac{1}{2}$  million United States citizens are confined to mental institutions; and it is estimated that over 10 million ( $\frac{1}{14}$  of the total population) persons now living will sometime in their lives need hospitalization in a mental institution. More than 1 and  $\frac{3}{4}$  million men were—because of psychiatric and allied disorders—rejected by the Army. From  $\frac{1}{2}$  to  $\frac{3}{4}$  of all patients seeking medical aid have some psychoneurotic ailment. More than 16,000<sup>2</sup> persons committed suicide last year. Even the law courts confirm the need for preventive psychiatry. In 1942, 157,000<sup>3</sup> were in prison. In the same year 5,000 persons were charged with murder. In 1942, there were  $\frac{1}{4}$  million divorces as over against 1 $\frac{3}{4}$  million marriages.

There are abundant facts to attest that preventive psychiatry can be instituted; the problem, as always, is one of techniques. Even in the psychoses, wherein our knowledge of etiology and treatment is unclear, much can and is being done on the prophylactic level. Dissemination of information and the organization of clinics in the campaign against alcoholism and venereal disease are steadily reducing the number of psy-

choses due to syphilis (responsible for 10% of first admissions) and to drunkenness (an other 10% of first admissions). It is, however, in the field of neurotic and abnormal social behavior that the greatest need for preventive therapy lies; and it is here that the greatest benefits will manifest themselves.

Stated in simplest form, the goal of preventive psychiatry is twofold: (1) to increase to maximum strength the resistances of all men, and (2) to reduce to a minimum the stresses which operate to precipitate neurotic behavior.

It is a truism to say that *not* symptoms but causes must be treated. As its very name implies, preventive psychiatry is fundamental, seeking to cut away the very roots of evil and cultivate the roots of well being.

Dispute though we may as to terminology or the weighting of various determining factors, we all agree that in the formation or distortion of personality these things are of utmost significance: (1) the parent-child relationship and (2) the stresses—internal and external—to which every personality is subjected. It is, accordingly, in these two realms that preventive psychiatry must be initiated and developed.

It is the childhood experiences which to a large degree determine adult personalities and patterns of behavior. The repeated response becomes habitual and tends not only to perpetuate itself but to irradiate. It is in the framework of the inter-relations of parents, of parents and children, of the child and his siblings that far too often there emerges the picture of insecurity, dependence, intellectual subjectivity, egocentricity and emotional lability.

Preventive work then should begin in the home; but the home itself does not exist and cannot be modified as a self-limited entity. Just as the child echoes the harmony or dissonance, reflects the light or shadow of his home, so the family in turn is bound up with

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

<sup>2</sup> Vital statistics, U. S. Dept. of Commerce.

<sup>3</sup> Chicago Daily News Almanac, 1946, p. 802.

and determined by the larger society of which it is a part.

The welfare of the individual man and of society is inseparable. In a society where the economic level is such as to deprive man of food and shelter or even to curtail his opportunities for education and relaxation, true mental health cannot exist. In a society where social pressures operate to segregate into "superior" and privileged groups as over against "inferior" and degraded groups, true mental health cannot exist—within either group. In a society infected with injustice, discrimination, and intolerance—with all their attendant fears and hatreds—true mental health cannot exist. The catalogue of social ills is long, and each is the breeding ground for yet more ills. In our democratic concept, the individual man will always be the ultimate value; but we realize that his health and happiness, his well-being can best be secured and maintained only in a society which has the same security, the same guarantees.

Our job is not to etch a gloomy picture of what is or to paint a fair landscape of what might be; but to chart a course to our goal and to set sail thereon.

The principles of preventive psychiatry may be difficult to execute, but their formulation can be simply stated. It is necessary: (1) so to educate the parents in the understanding and guidance of their children, and so to educate the children in techniques of self-development as to secure a sound base of objective thinking and stable emotions. It is necessary: (2) to seek the removal of unhealthy economic and social pressures; and (3) it is important to establish adequate facilities for the early treatment of personal and social abnormalities, and to educate the people in their recognition and cure. And the ultimate goal of these procedures is not only to prevent disease but also to cultivate positive mental health.

These ideals can be actualized. Practical steps can be taken. The many valuable efforts already being made in this direction can be given wider reach and greater scope. And the method, I believe, lies in more adequate organization and in heartier cooperation. Our military experience has taught us much

about the practicality of these preventive measures.

The psychiatric problem in the Army was severe. More than 50% of the medical discharges were for psychiatric reasons and many men were rendered ineffective because of such symptoms. To combat this situation prophylactic measures were instituted. Psychiatrists were assigned not only to hospitals but to training camps and to army divisions. Their duties were to treat men at the earliest possible moment and even more important to develop preventive measures. As a result of their activities there was a definite drop in the number of psychiatric casualties. They initiated educational programs to all soldiers on first admission to the service. Realistic and practical information on the symptoms of maladjustment, on the techniques of adjustment, on fear and its management was presented. Lectures were given to officers on the rôle of emotions in the actions of men, on the factors which motivate behavior. Inquiry was made into the causes of neurotic and abnormal behavior;<sup>4</sup> and in the event of inefficiencies and of unhealthy situations, the psychiatrist was directed to inform the commanding officer about them. The mental hygiene efforts strove not only to decrease the number of psychoneurotic men, but to create a milieu that would enhance morale and the well-being of normal men.

Where the military organization was attuned to these needs and desirous of implementing them, gratifying results were obtained. In a cooperative organization, it was possible to deal directly and expeditiously with the disturbing environmental pressure and to find time and opportunity to cultivate the attitudes of the officers and men. When, however, apathy, disinterest or antagonism supervened, the organization did not function in these preventive measures and the best efforts of the psychiatrist were to no avail. Organization and cooperation were the *sine qua non* of success.

Differing as civilian life does from military organization, the same principles are still applicable. To reduce and ameliorate

<sup>4</sup> Kraines, S. H. The Adviser-System—Prophylactic Psychiatry on a Mass Scale. *Mental Hygiene*, 27: 592, October 1943.



neurotic behavior it is necessary to inculcate mentally healthy attitudes, and to correct unhealthy economic, social, and other pressures. And to achieve these ends, in civilian life as in the military experiment, an adequate organization is essential. Our society today could not function adequately without the proper organization of our police forces, our postal services, our public health department. The public health measures are particularly akin to the needs of preventive psychiatry. In the city, the state and on a federal level, the department of public health is able to institute those procedures which are essential prerequisites to our way of living, and which could not be undertaken by purely individual actions. And only through similar organization can prophylactic psychiatry function effectively.

Many agencies today are active in this field. The mental hygiene committees throughout the country are doing superior work in awakening the people to the needs of mental health. Child welfare services and organizations are continuously active in disseminating the latest concepts on the physical and mental welfare of our youth. Social hygiene associations engage in many activities including the writing of articles in popular magazines toward the end of improving the social and mental health of the community. The Springfield plan has shown how it is possible to integrate the activities of the school and the community in a technique to foster healthier social attitudes. Each of these splendid groups working with energy and direction is of necessity concerned with particular problems and is limited in the number of persons it can reach and serve. Often they meet with active opposition, more often with ignorance, apathy and indifference. The persons involved are too many, and the social problems too complex for any single agency to be more than partial in its effectiveness.

It is for this reason that there is need for a governmental organization to implement and extend the activities of these groups. There is need for well financed, permanently staffed organizations on the same three levels as that of the public health departments, in city, state and national government. Each

of these departments should be staffed by the best minds available in the community and should include psychiatrists, psychologists, social workers, educators and other related trained personnel. The function of these divisions should include: (a) cooperation with the department of education in formulating the mental hygiene aspect of education of all children and in providing special mental hygiene services for those children in need; (b) to stimulate and implement programs of adult education in mental hygiene; and (c) to organize clinics and other means of dealing with child behavior problems, marital problems, vocational adjustment, labor-management relations, and anti-social behavior as seen in law courts.

To be successful such departments need to be adequately staffed, must have sufficient funds, and should be energetically directed. Should these criteria be lacking little will actually be achieved. Since the goal of these departments is to inculcate mental hygiene in the community, the personnel in charge must themselves be not only well trained in theory, but also have mentally healthy attitudes, as well as qualities of integrity and energy which can serve for example.

On the Federal level, there is now before Congress a bill (S. 1160 and H.R. 2550) entitled the "National Neuropsychiatric Institute Act." This Act,<sup>5</sup> if passed would provide for the study and treatment of psychiatric conditions, and the collection of information on the causes and prevention of neuropsychiatric disorders. This institute could serve on a national level at which the whole field of preventive psychiatry could be formulated and clarified. This institute could in collaboration with the United States Office of Education formulate programs of mental hygiene education both for children and for adults. The institute can establish close liaison relationship with the city and state departments of mental health and with the voluntary societies of mental hygiene, and through these media distribute and collect relative information. This institute can do much widely to promulgate the tenets of mental health.

<sup>5</sup> Since the reading of this paper, this bill has been enacted.

It is the responsibility of this association to be vitally interested and constructively active in this field of preventive psychiatry. Representing, as it does, the psychiatric thought of America, this society can do much to pioneer in this field. Towards this end, it is suggested that The American Psychiatric Association set up a committee in preventive psychiatry; that this committee be charged with investigating the entire problem of prevention; that it outline as its initial specific task the best known methods of education of children in the principles of mental health; that it proceed by determining the educational activities of existing organizations; that it secure suggestions on techniques and principles from leading educators, psychologists, sociologists, psychiatrists and others of special knowledge; that it prepare an *overall program* on mental hygiene education of children; that after approval by the executive committee, it make public its recommendations, and disseminate its concepts in a manner it deems most effective. It is

further suggested that the work of this committee be continuous and that at regular intervals its recommendations be revised in accordance with newer knowledge and experience.

Under such a procedure it will be possible greatly to improve the mental health of this nation. Our democracy has reached that stage of development wherein the mental attitudes essential for community living can no longer be left to chance or sporadic effort. Under no condition should there be regimentation of thought or standardization of emotions, yet under existing circumstances, the opposite extreme of almost anarchistic lack of direction in the development of mental health is equally deplorable. Between these two extremes there is a definite responsibility of society to its members, a responsibility to insure the greatest maximum mental health for the individual in relation to himself, and for the individual in relation to his fellow men.

## THE FRUSTRATION THRESHOLD<sup>1</sup>

MANDEL SHERMAN, M. D., CHICAGO, ILL.

This paper is a report of an experimental study of the frustration level of normal, neurotic and psychotic persons. The purpose of the study was to investigate the relative frustration levels of well-adjusted, neurotic and psychotic individuals, and the differences in the frustration reactions of different individuals.

The systematic psychological work on frustration dates from the experimental investigation of Pavlov. In his attempt at conditioning dogs, he discovered that some of the animals developed what he called "neurotic behavior," when they were forced to respond discriminately to a situation which was much too difficult for them. His later work and the work of other experimenters showed that a number of conditions created a frustration reaction in animals resulting in a variety of behavioral abnormalities.

The conditions found to be universally productive of frustration in animals were the following:

1. Forcing the animal to persist in a discriminative act beyond its usual capacity.
2. Removal of reward so that the motivated act remains incomplete.
3. Substitution of punishment for reward at the completion of some task, such as maze running.
4. The continued presentation of a conditioning stimulus in the inhibition of strong reflex reactions.
5. Forcing the animal to respond to stimuli, the reactions to which are ordinarily mutually exclusive.
6. Delaying the reinforcement stimulus to a positive conditioned response.
7. Reinforcing a conditioned stimulus which previously had an inhibitory effect.
8. Rapid transition from one conditioned stimulus to conditioning with another type of stimulus.
9. Forcing an animal to discriminate conditioned stimuli to mutually antagonistic responses.

Even though the conditions for the arousal of frustration are relatively simple in animals, many complications enter into the interpretation of the results. It is relatively easy to produce quantitatively determined motivations which are prerequisites for frustration. An animal may be motivated to learn a discrimination test or run a maze by keeping it without food for a given length of time. In spite of the ability to measure the motivation, many experimenters noticed that animals behave quite variably. Some animals show evidence of frustration much quicker than others. Rats, for example, vary greatly in their ability to withstand punishment before evidence of frustration is observed. Animals also vary in their behavior after they are frustrated. The most common reaction is a disruption of their motivated activity, a substitution for the integrated action by haphazard restless activity, and, in intense frustration, total disorganization involving convulsive or paralytic reactions.

In human subjects, experiments on frustration cannot be carried out as effectively as on animals. This is due mainly to two factors: (1) the variability of the motivation to complete a task and (2) the inhibition and disguise of the behavior resulting from frustration. It is extremely difficult to know the degree of motivation of any individual. One person may be strongly motivated during the experimental situation whereas another person may be relatively unmotivated, although he may verbally express a strong interest. Children do not vary as much as adults. The responses to frustration are also more subtly inhibited or disguised by adults than by children. This is not at all surprising in view of the long period of conditioning which adults have undergone in the very processes of inhibition and disguise of overt behavior.

In the attempt to motivate individuals in a task in which it is proposed to frustrate them, it is important to choose one which has universal familiarity and importance. The task must also be of the type which, i

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

failed, has significance for the individual. It is for these reasons that problems in learning have been most commonly used with children. This type of problem also usually functions effectively with adults. Other types of problem-solving situations have also been used in studies of frustration. The experiments of Barker, Dembo, and Lewin at the University of Iowa are well known, and the methods which were used can be repeated by other experimenters. In one of their studies they motivated children to play with toys and then prevented them from playing with more attractive toys to which they had been exposed. The experimenters were able to study the frustration reactions by observing the aggressions, the haphazard and undirected activities, and the regressive behavior of these children.

The earlier studies of frustration usually involved an evaluation of the emotional reactions of the subjects to relative success and failure. The most common method employed was to observe either how long the individual could persist in a situation in which he obviously failed or how much pain or punishment he could endure without giving up the task either by a decrease of effort or by escape. We shall see later from the interpretation of this study that the mere persistence in a task is not a criterion of a degree of frustration. An individual may persist in a task although he may also be intensely frustrated. Perseverance may be the product of authoritative drive or because of fear of punishment. Indeed, some subjects persevere because of the very fact of frustration rather than a feeling of success. The frustration acts as a motivator in the sense that it results in an increasing sense of fear of the consequences of failure.

It is clear that animal and human frustration are not similar. Frustration in human subjects inevitably involves a sense of failure. The frustration reaction involves not only a disruption of the motivated activity but also a painful realization of the meaning and consequences of the failure. In order to create frustration, the activity in which the individual fails must not only be important from the standpoint of the necessity of completing it at the moment, but must also be important from the standpoint of his concept

of his ability and status. Thus, an adult who is given a problem in chemistry may readily fail without any frustration effect, although he may be chagrined for the moment. If his training was not in chemistry, he quickly rationalizes his failure and even considers it as an amusing incident. It is quite otherwise, however, for the chemist who fails in a problem-solving situation involving chemistry and who is frustrated mainly because he interprets his failure in terms of what is expected of him.

The subjects on whom data are reported in this paper consisted of 75 children and 40 adults. Forty of the children were considered normal, 20 neurotic, and 15 schizophrenic. Of the adults 10 were mild schizophrenics, 12 had been diagnosed neurotics, and the remainder normal. The neurotic children were so diagnosed clinically by psychiatrists but were not being given psychotherapy. Some of the schizophrenic children had been treated psychiatrically. They presented the typical symptoms of confusion, unpredictable behavior, emotional rigidity, and in some cases compulsive and manneristic behavior. Of the adult neurotics 7 had somatic complaints as well as anxiety, and 5 were anxiety neurotics without specific somatic complaints.

The most important problem to be solved in order to continue the experiment was the choice of the problem upon which the subjects could be made to fail. A good deal of preliminary work showed that many problems, such as opening a puzzle box which was so constructed that it could not be opened, did not universally produce a sense of failure. The subjects quickly rationalized their inability to work on puzzles. A mental problem requiring knowledge was also ineffective. Except for the young children, most of the subjects were not disturbed by their lack of knowledge and claimed that the information that was asked of them was too specialized. Finally, two types of problems were selected: (1) the recall of digits, and (2) the tracing of a maze blindfolded after it had been learned visually. The recall of the digits was of universal interest. The children considered the task similar to the many school tasks in which success was important. The adults

considered the recall of digits a problem of mental agility and thus were strongly motivated. The subjects were given a practice period of repeating sequences of 2 and 3 digits. After they had learned what to do and appeared as if they were motivated to succeed, increasingly longer series of digits were given them so that finally everyone failed. Their failures were brought to their attention immediately with the statement that the examiner was very much surprised at their inability to perform such a simple task. When the experiment was carried on with the adult subjects, a number of graduate students were always present. The presence of the students was considered a reinforcing factor in the arousal of frustration.

The maze tracing with a stylus was also found adequate in motivating and in frustrating the subjects. After they had learned the maze which was of a simple type, they were blindfolded and instructed to trace the maze without error. After the subjects were blindfolded, the maze was so changed, however, that complete success was impossible. When the subjects hesitated or said they could not go on, reinforcing statements were made, such as, "try again, I am surprised that you are unable to do this well because even a fourth grade child can do this quickly."

The reactions to frustration were measured by (1) identification of the level of difficulty at which the subjects began to be uncertain and to substitute haphazard activity for the integrated and oriented activity they previously showed; (2) changes in the movements of the body, facial movements, and the movements of the arms and legs; and (3) changes in the psychophysiological reactions—brain wave activity, pulse, blood pressure, respiration, hand tremors, and skin resistance.

An evaluation of the 3 measures of frustration showed clearly that the psychophysiological reactions portrayed accurately and quantitatively defined the level and the intensity of the frustration. They also correlated with introspective reports of the time in the course of the experiment at which frustration began. The subjects frequently did not feel frustrated even though their movements became less orderly and their activity

less well integrated. When the physiological changes became significant, they universally reported evidence of frustration, such as irritability, feeling of shame, disappointment and aggressive attitudes against the examiner. The arm movements of the children were much more active at the point of frustration than those of the adults, but the tremors of the hands and fingers were much more intense and occurred earlier in the adults. Facial movements, especially of the mouth, occurred more quickly in the children than in the adults.

The physiological reactions were measured during a five-minute rest period, the period of learning the maze and of becoming accustomed to the recall of digits, during the period of failure, and during a final period of rest. The basal physiological reactions were calibrated on the basis of the measurements during the initial period of rest and were then compared with the reactions during the other periods. The rapidity with which changes took place and the extent of the changes were considered the criteria of frustration. The results of the evaluation of the physiological reactions showed the following:

1. The threshold level of frustration was highest in the psychotic, next highest in the normal, and lowest in the neurotic subjects. These relative levels were found both in the adults and in the children.

2. During the rest period the degree of emotional tension as measured by hand tremors, by the skin resistance and respiration, and by the number of movements of the facial muscles was highest in the neurotic individuals and lowest in the psychotic subjects.

3. The hand tremors, bodily movements and physiological changes of the neurotic individuals were on the average greater during their rest periods than during the initial period of frustration of over 50 per cent of the normal subjects.

4. Approximately 60 percent of the psychotic individuals showed less intense changes at the point of failure than the neurotic individual showed during the rest periods. All of the psychotic individuals required a much greater period of failure before any changes could be observed either

in the movements or in the physiological reactions. Three of the schizophrenic children and 2 of the schizophrenic adults refused to go on following a failure, but they showed insignificant physiological changes at these times.

5. The variability of the physiological reactions correlated with the clinical interpretation of the severity of the schizophrenic condition. Those who were considered the most serious schizophrenics in terms of the degree of dissociation and the prognosis showed the least variability and the highest threshold level of frustration.

neurotic and psychotic individuals, and indicate the level at which frustration results in physiological change.

### SUMMARY

The experiment to determine the threshold of frustration was conducted with normal, neurotic and psychotic subjects. It was difficult to present a problem which was equally motivating, and which would always result in frustration at the point of failure. Preliminary experimentation showed that a learning situation in which each subject was psychologically prepared to consider suc-

TABLE I\*

COMPARISON OF NORMAL, PSYCHOTIC, AND NEUROTIC SUBJECTS

Measure	Normal		Psychotic		Neurotic	
	Mean	Per-centile	Mean	Per-centile	Mean	Per-centile
1. EEG: Dominant alpha wave frequency....	9.6	50	10.3	18	8.9	83
2. EEG: Percent change of intensity five seconds before to five seconds after stimulation. Average of total responses.....	+ 2.6	50	+ 6.3	39	-16.6	90
3. EEG: Percent change of intensity from five seconds before stimulation to period of response. Average of total responses.....	15.0	50	15.6	50	34.4	77
4. EEG: Standard deviation of dominant alpha wave frequency from second to second....	.63	50	.53	32	1.14	98
5. Log conductance change of galvanic skin resistance from beginning to end of experimental period .....	- .37	50	- .23	42	- 1.57	92
6. Respiration: Number of respiratory movements per minute.....	23.2	50	21.7	20	26.3	85
7. Respiration: Standard deviation of number of respiratory movements from minute to minute .....	.85	50	.66	9	1.27	88

\* Adapted in part from Mandel Sherman and Hudson Jost, Quantification of psychophysiological measures, *Psychosomatic Medicine*, Vol. VII, No. 4, July, 1945.

There were some exceptions to this general trend. In two cases the threshold was as low as in the average normal, but in no case was it as low as in the average neurotic subject.

Table I shows the comparison of normal, psychotic and neurotic subjects on some of the physiological reactions.

The various measurements were transmuted into standard scores in order that a more adequate comparison could be made between the reactions of the various subjects than could be made by the use of the raw scores of the measurements. The differences between the different types of subjects can be clearly seen in item 4, for example. The differences are fairly reliable indices of the relative stability of the normal,

cess imperative was the best method of creating frustration.

It was much easier to create frustration in the children than in the adults, and the reactions of the children were much more consistent. The difficulty of frustrating adults was probably due to two factors, the rationalization of their failures and the inability to motivate them in the task presented. Most of the children were easily motivated in a learning situation, obviously because they were accustomed to respond to learning situations in school. The adults, however, evaded the frustration crises because they tended to create many reasons why they could not complete the tasks successfully.

The threshold of frustration was measured in terms of the rapidity with which frustration could be induced and the difficulty of the task which produced it. The criteria of frustration were:

1. Disruption of the integrated and planned activity.

2. Haphazard activity involving the hands, arms and body.

3. Significant changes of the physiological reactions, such as the rhythm and amplitude of the brain waves, skin resistance, respiration, blood pressure and pulse.

The most consistent physiological reactions which correlated with frustration were skin resistance as measured by the photopolygraph, and respiration. Changes in the brain waves were not as significant as the other measures, although there was a marked and consistent difference between the schizophrenic and the normal. The electroencephalographic tracings in the schizophrenic individuals were unusually stable, with few changes in rhythm or amplitude as contrasted with the many variations in the normal and neurotic individuals.

The threshold of frustration was significantly higher in all of the schizophrenic subjects than in the neurotic or the normal. The neurotic threshold was quite variable, and was lower than in the normal. Whether the threshold of frustration of the neurotic individual correlates with the severity of the neurosis could not be adequately ascertained because there was no way of clinically quantifying a neurotic condition.

No claim can be made regarding the diagnostic value of the threshold of frustration. It is not too presumptuous, however, to claim that it can be a valuable adjunct to a clinical diagnosis. It may be especially valuable because the threshold can be determined objectively and quantitatively, although one must be aware of the inevitable difficulties involved in determining frustration in an artificial laboratory situation. The method may be especially valuable in those cases where the clinical data are not sufficiently adequate and where differentiation between individuals is necessary.

# TRIDIONE THERAPY <sup>1</sup>

## SPECIAL ASPECTS OF ITS CLINICAL USE

MEYER A. PERLSTEIN, M. D., CHICAGO, ILL.

It is 16 months since we delivered the first public account of the clinical investigation of tridione, then a "new experimental drug" (1). Since that time, this particularly useful therapeutic agent, first pharmacologically investigated by Richards and Everett(2), has been the subject of widespread application and study(3-10). A more complete

of various neurologic disorders treated with tridione by us. Patients were observed for periods varying from 5 weeks to 2 years; those who failed to return for regular visits were excluded from our tabulations. Studies were done in the Children's Neurology Clinic of Cook County Hospital, Chicago, Illinois, the Cerebral Palsy Center of St.

TABLE 1  
THERAPEUTIC EFFICACY OF TRIDIONE ACCORDING TO DIAGNOSIS

Diagnosis	No. of cases	Benefit		
		Marked	Slight	None
<i>Epilepsy</i> .....	75			
Organic .....	29	4	5	20
Grand mal .....	17	2	3	12
Petit mal .....	12	2	2	8
Idiopathic .....	46	34	5	7
Grand mal .....	10	5	1	4
Petit mal .....	30	23	4	3
Psychomotor .....	6	5	1	0
<i>Tetanus</i> .....	5	2	1	2
<i>Cerebral palsy</i> .....	36			
Spastics .....	12	2	1	9
Athetoids .....	21	12	4	5
Others .....	3	0	0	3
<i>Chorea</i> .....	5	0	1	4
<i>Parkinsonism</i> .....	4	0	0	4
<i>Congenital tremors</i> .....	1	1	..	..
<i>Behavior disturbances</i> .....	10	6	2	2
Total .....	136			

account of our own previous observations on 75 cases will appear in an early issue of the *Journal of Pediatrics*(11).

In this paper we shall present an up-to-date summarization of our observations, with special emphasis on usage of the drug in children, including a group afflicted with cerebral palsy. The report reviews 136 cases

John's Home and Hospital for Crippled Children, Springfield, Illinois, and in private practice in Chicago.

Of the 136 cases observed, 65, or roughly half, were between the ages of 5 and 10. There were 20 under 5 years of age and 24 between 10 and 15 years. In the group 15 to 20 there were 12, and in those over 20, 15. The youngest patient was 1 year of age, an epileptic; the oldest, 68 years, a victim of tetanus.

Seventy-five, more than half the cases observed, were epileptics (Table 1). Of these, 29 were due to organic brain disease, 17 manifesting grand mal seizures and 12, petit

<sup>1</sup> Read at the 102d annual meeting of The American Psychiatric Association, Section on Convulsive Disorders, Chicago, Illinois, May 27-30, 1946.

From the Children's Neurology Clinic of Cook County Hospital, Chicago, and St. John's Home and Hospital for Crippled Children, Springfield, Illinois.



mal. The remaining 46 were of the idiopathic variety: 10 exhibited grand mal attacks, 30, petit mal, and 6, psychomotor seizures.

The rest of the group includes 5 cases of tetanus, 3 adults and 2 children; 36 cerebral palsies, including 12 spastics, 21 athetoids, and 3 with dystonia musculorum; 5 cases of chorea; 4 of parkinsonism; 1 of congenital tremors; and 10 behavior disturbances.

Tridione was administered in capsules or an elixir, in doses varying from  $2\frac{1}{2}$  grains twice a day to 10 grains 5 times a day. Usually, 5 grains 3 times a day was found to be optimal in children over 6 years of age. The dose was reduced with the appearance of drowsiness or other toxic manifestations and, if no therapeutic benefit could be observed with levels below the point of drowsiness, the drug was reported as ineffective for that particular case.

A special word might be said about the technique of administration of the drug in tetanus patients. Here the drug was delivered by continuous intravenous drip in a saline solution of such concentration as to provide 0.5 to 1 gm. of tridione per hour. The solution was made from 20 c.c. ampules containing 10 gm. of tridione in 60% alcohol. Intermittent intramuscular or intravenous administration produced sedation that was too transient and hence was stopped.

### RESULTS

In judging the effect of tridione in our cases, we attempted to correlate the reports of patients, and their nurses or attendants, with our own observations, and we rated benefit as "marked" when improvement seemed dramatic and unquestionably related to use of the drug; "slight," when improvement was objectively evident, but not dramatic; and "none," when symptoms remained as before or grew worse. Results are further segregated according to diagnostic category (see Table 1).

Of 30 cases of idiopathic petit mal, 23 showed "marked" benefit, four, "slight," and three, "none." Half of 10 cases of grand mal were markedly benefited, 1 slightly, and 4, not at all. Five cases of psychomotor seizures were markedly improved, the sixth,

slightly. (This particular benefit corroborates that described recently by DeJong (6).)

In the organic convulsive disorders only 2 of 12 petit mal cases were benefited markedly, 2, slightly, and 8 not at all. Likewise in the organic grand mal cases, 2 of 17 showed marked improvement, 3, slight, and 12, none.

Observations were made on 36 cases of cerebral palsy. Twelve were of the spastic variety, and of them only 2 showed marked benefit, 1, slight, and 9, none. There were 21 athetoid palsies and 12 of these were markedly benefited, 4 slightly, and 5 not at all. There was no apparent benefit in 3 cases of dystonia musculorum.

Six of 10 cases of behavior disturbances showed marked improvement, 2 slight, and 2 none. Improvement was most evident in those whose symptoms followed clear-cut organic brain disease. Two of 5 cases of tetanus<sup>2</sup> were markedly benefited, 1 slightly, and 2 who were chronically addicted to alcohol, not at all. In a single case of congenital tremors benefit seemed marked, but none of 4 cases of parkinsonism were helped, and only 1 of 5 cases of chorea showed as much as slight improvement on the drug.

### DISCUSSION

It should be readily apparent that evaluation of the therapeutic efficacy of any drug for the conditions studied is fraught with difficulty for they are subject to spontaneous remissions and exacerbations, which might be incorrectly attributed to the drug. It is necessary, therefore, that patients be observed for long periods and that conclusions reflect personal clinical evaluation, as well as the resolution of statistical data.

From the results obtained in epilepsy due to organic brain disease it would appear that tridione was of some benefit in controlling either grand or petit mal attacks, particularly in the posttraumatic conditions. No drug is as effective for the organic-caused seizures as it is for the idiopathic variety; moreover, tridione seemed less dependable than dilantin and/or phenobarbital in controlling grand mal attacks. (We recognize that in some cases tridione appears actually

<sup>2</sup> From the Children's Neurology Service, Cook County Hospital.

to increase the severity of grand mal seizures, and, yet, paradoxically, it remains an adjuvant to the control of others.)

To appreciate the remarkable benefits obtained from the use of tridione in idiopathic petit mal, it should be emphasized that none of these patients had responded to any previous medication, which included phenobarbital, dilantin, mebaral, bromides, ammonium chloride, and beta-glutamic acid. Furthermore, in 4 cases in whom dilantin or phenobarbital controlled the grand mal seizures but precipitated petit mal spells, the latter were controlled, in 3, by the addition of tridione to previous medication. Note too that half the cases of idiopathic grand mal epilepsy were "markedly" benefited when tridione was used as an adjuvant. This is hardly sufficient to recommend it as a primary anticonvulsant but again encourages its use as an adjuvant or synergist (particularly, we have found, with phenobarbital). This opinion was corroborated recently by Buchanan(7).

A word should be said about combined petit and grand mal attacks. It is our impression that tridione, either alone or with phenobarbital, proved superior to its combination with dilantin. Further, dilantin and tridione appeared at times to be antagonistic, particularly in the control of petit mal attacks.

We observed that tridione, unlike phenobarbital and dilantin, could be abruptly terminated without danger of precipitating "status epilepticus." Such recurrences as did follow termination appeared no more severe than symptoms prevalent prior to medication. Further, after control of the attacks, termination of medication often resulted in no recurrence.

It is particularly difficult to evaluate the beneficial results obtained in behavior disturbances, even though they were not sustained beyond a few months. Certainly nothing similar was ever seen in the use of barbiturates or bromides. It may be that tridione affords a particularly selective, sedatory effect on the brain areas involved in ("organic") behavior disturbances.

To appreciate the observations made in cerebral palsy a brief descriptive digression

is indicated. Cerebral palsy is classified (as suggested by Phelps(12)) into "spastics," those with pyramidal tract lesions, and "athetoids," "rigidities," "ataxics," and "dystonias," those with basal nuclear or extrapyramidal lesions. In the former, upper motor neuron signs are present, *e.g.*, increased deep reflexes, ankle clonus, Babinski, and absent superficial reflexes. Moreover, there is seen the "stretch" reflex, *i.e.*, reflex contraction of a muscle on stretching. The athetoids have normal deep and superficial reflexes. They are characterized by continuous, involuntary motions and grimacings. Tension in the spastics is involuntary and due to stretch reflexes initiated by attempt at voluntary motion. Tension of the athetoid is voluntary, the result of conscious attempt to control involuntary athetoid motion. In the dystonia musculorum and rigidities, tension or spasm is due to basal nuclear involvement but differs from that of the athetoid.

The relief of rigidity, spasticity, and tension is often paramount as a preliminary to the training and education of these children. Heat, sedation, music, voluntary relaxation, and the common sedatives have been employed for this purpose, all with equivocal results. Though curare releases tension, its effect is transient and it may prove toxic with prolonged usage(13). Voluntary relaxation is the ultimate goal of training, but artificial means are employed to assist in training.

The results obtained by the use of tridione in cerebral palsies, detailed earlier, indicate that it is effective in relieving the voluntary tension of athetoids, but of little value for release of the involuntary spasm of spastics or dystonics.

The two failures in tetanus were in alcoholic adults, and it was felt that the alcoholism may have engendered resistance to tridione as it often does to the barbiturates. From the fact that alcohol relaxes athetoids to the same degree as does tridione, one might suspect that the 2 drugs had a similar action, and that tolerance to 1 drug might be associated with tolerance to the other.

A word should be said about electroencephalographic observations, "before and after" examples of which are included in

Fig. 1A, 1B, 2A, 2B, 3A, and 3B. It readily is evident that improvement in clinical manifestations is corroborated by "improvement" in the EEG pattern. Thus, tridione in contrast to phenobarbital and dilantin mirrors its clinical benefit in the EEG.<sup>3</sup>

When the patients are dichotomized into those with pyramidal tract and those with extrapyramidal tract lesions (Table 2), it is evident that only 4 of 29 patients with pyramidal system lesions could be called "markedly" benefited, while 47 of 68 patients

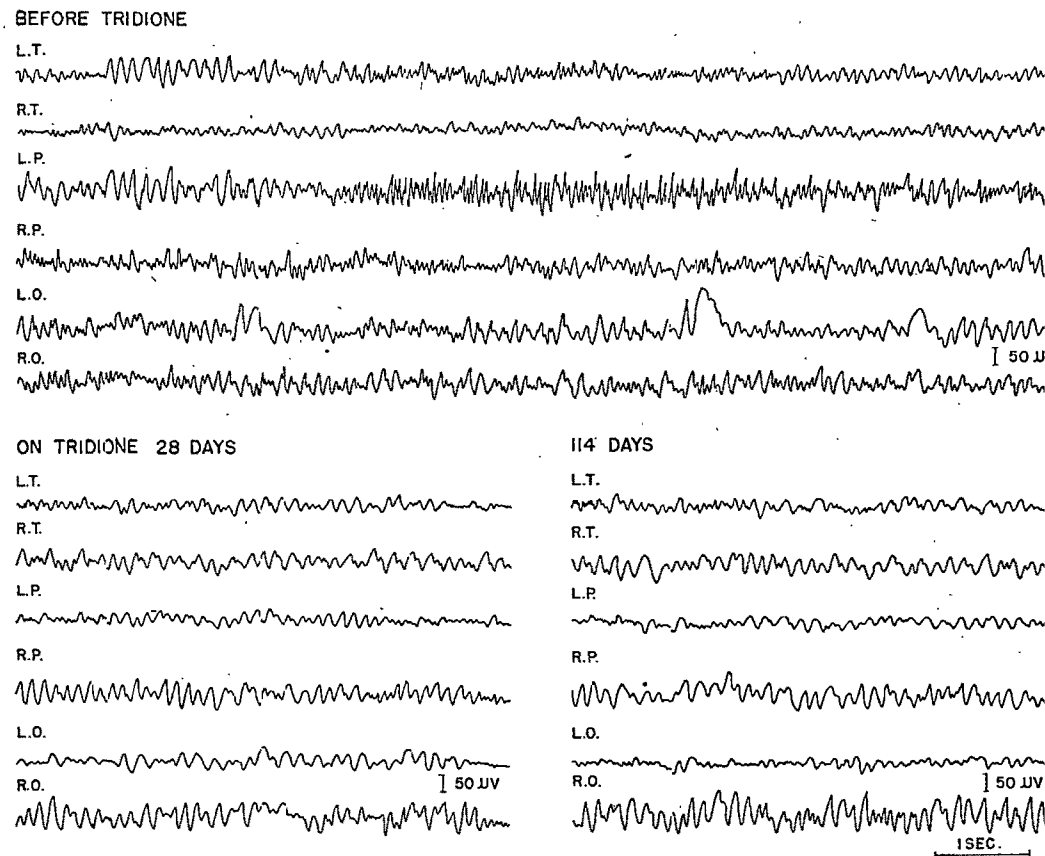


FIG. 1. A.—(Case 1.) Before tridione: This patient had 2 to 3 grand mal seizures per year and 2 petit mal per week. The electroencephalogram shows a marked asymmetry between the hemisphere with a focus of fast activity in the left parietal area and an atypical wave-and-spike focus in the left occipital region.

FIG. 1. B.—(Case 1.) On tridione for 28 days: No grand mal and only 1 or 2 petit mal seizures occurred in this period. The electroencephalogram is greatly improved. There are no seizure discharges. The asymmetry is still present but the side of lowest amplitude is on left instead of right and all activity is moderately slow.

On tridione for 114 days: No grand mal and only 1 or 2 petit mal attacks per month in the period. The electroencephalogram shows no seizure discharges; the background activity is moderately slow and asymmetry is still present.

A correlation of the observations made indicates that tridione is more effective in idiopathic epilepsy than in the organic variety, more in athetoid cerebral palsies than in the spastic (*i.e.*, pyramidal tract lesion) varieties.

<sup>3</sup> Electroencephalograms were interpreted by Dr. Frederick A. and Erna Gibbs.

with extrapyramidal involvement showed "marked" improvement on the drug.

Everett and Richards suggested in their early reports (2) that the anticonvulsant effect of the tridione on metrazol convulsions might involve subcortical action, *e.g.*, the basal nuclei, midbrain, or the connecting systems.

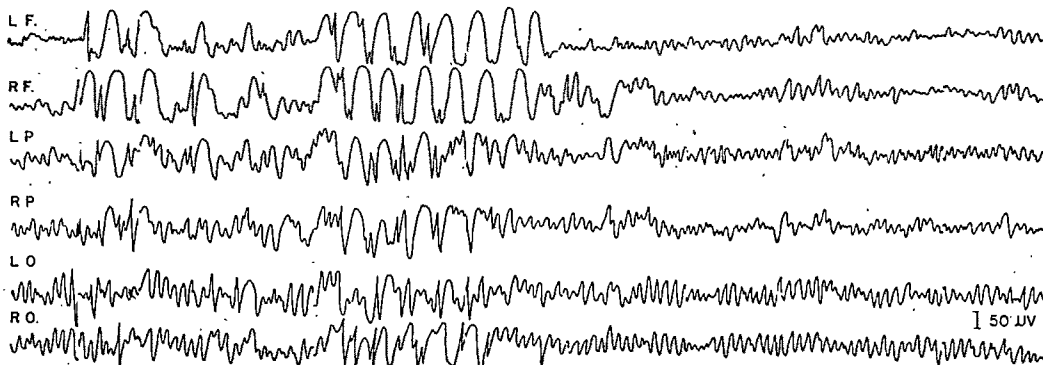
tem between the cortex and lower centers. It follows that, since the drug's principal value is in petit mal, this disorder might arise below the cortex, perhaps in the midbrain as suggested by Penfield and Erickson(14). (The changes in EEG pattern in petit mal must then be attributed to cortical altera-

tient with congenital tremors were "markedly" benefited.

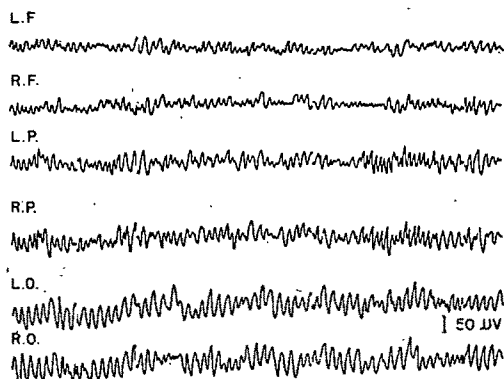
### TOXICITY

Relatively few side-effects from the use of tridione were noted in our cases, some patients receiving as much as 50 grains a

#### BEFORE TRIDIONE



#### ON TRIDIONE 11 DAYS



#### 37 DAYS

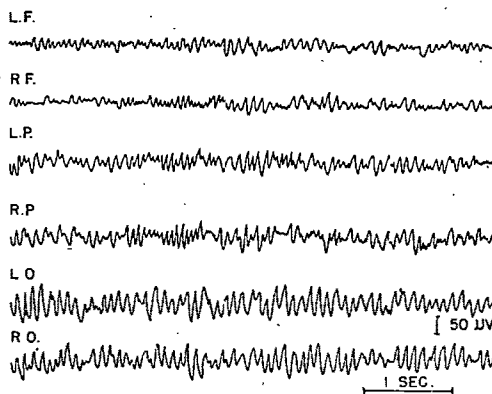


FIG. 2, A.—(Case 2.) Before tridione: Patient has had only 2 grand mal attacks in her entire life, but 100 or more petit mal per day. The electroencephalogram shows frequent 3-per-second wave-and-spike discharges of the petit mal type. The background activity is slightly fast.

FIG. 2, B.—(Case 2.) On tridione for 11 days and 37 days: No grand mal, no petit mal. The electroencephalogram shows no spontaneous seizure discharges, and none could be elicited with hyperventilation. The background activity is still moderately fast.

tions secondary to primary subcortical disturbances.) Thus, having limited tentatively the effect of tridione to the subcortical centers, we can suggest further, on the basis of the observation herein reported, that this benefit is even further selective, for of 9 patients with chorea and parkinsonism, only 1 was as much as "slightly" benefited and 3 actually appeared to have become worse on the drug. Yet, 12 of 21 athetoids and 1 pa-

day without untoward reaction. (A tetanus patient was given 24 grams a day without toxic effect.) A 12-year-old boy with petit mal, not controlled by the drug, developed a transient amblyopia, but, even with the inclusion of minimal complaints, the incidence of toxic reactions in our series was less than 10% for the entire group. That this low incidence is largely a reflection of the preponderance of children in our series is in-

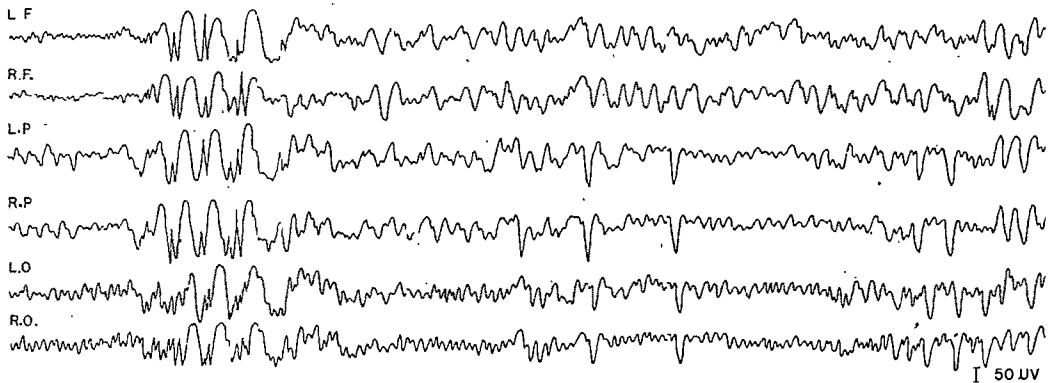
licated by the 40% incidence of side-effects in a subselection of adults. Most of these were mild, comprising visual disturbances (photophobia, blurring, changes in color, form, and perception) or dizziness. Rashes were observed in 3 instances and were both

to have no effect on the respiratory center, the blood-pressure, or the digestive system

### CONCLUSIONS

1. A progress report of clinical observations in the therapeutic use of tridione on

#### BEFORE TRIDIONE



#### AFTER TRIDIONE 47 DAYS

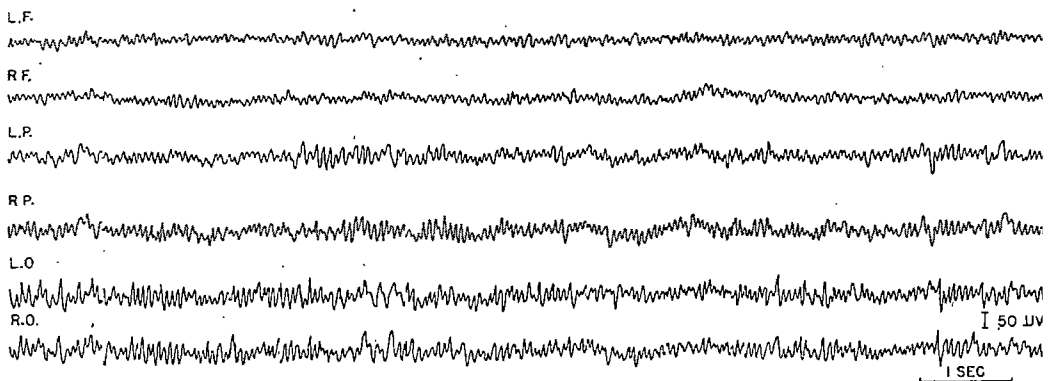


FIG. 3, A.—(Case 3.) Before tridione: The patient had 1 attack of grand mal every 3 weeks, nor of clinical petit mal, but approximately 3 epileptic equivalents (psychomotor seizures) per month. Electroencephalogram shows seizure discharges of the psychomotor and also of the petit mal type. The background activity is exceedingly slow.

FIG. 3, B.—(Case 3.) On tridione for 47 days: In this period no attacks of grand mal occurred and no epileptic equivalents (psychomotor seizures). The electroencephalogram is greatly improved. No seizure discharges are present, but moderately abnormal fast activity is present in all leads.

of morbilliform and fixed eruption types. In several instances we observed leucopenias with WBC's as low as 3,000. All toxic manifestations observed in our cases disappeared rapidly on discontinuance of the drug. We observed no hemolytic or aplastic anemias, or granulocytopenias.<sup>4</sup> Tridione appeared

136 cases of varied neurological manifestations, over a period of 2 years, is presented.

2. As previously reported, most spectacular benefits were obtained in cases of petit mal, where clinical improvement was immediate, associated with improvement in

<sup>4</sup> Since presentation of the paper there appeared reports (J.A.M.A. 132: 11, 13, and 44, 1946) of a fatal aplastic anemia (Harrison et al.), a fatal aplastic anemia and agranulocytosis (McKay, R. P.,

and Gottstein, W. K.), and an agranulocytosis with recovery (Greaves, R. J.), following the use of tridione. The patients were females, age 16, 23, and 25, respectively.

TABLE 2

## THERAPEUTIC EFFICACY OF TRIDIONE ACCORDING TO SITE OF PATHOLOGY

Diagnosis	No. of cases	Benefit		
		Marked	Slight	None
<i>Pyramidal system lesions</i>				
Organic brain disease with convulsions.....	17	2	3	12
Spastic cerebral palsy.....	12	2	1	9
	—	—	—	—
Total .....	29	4	4	21
<i>Extrapyramidal system lesions</i>				
Effective				
Idiopathic epilepsy, grand and petit mal....	46	34	5	7
Athetoid cerebral palsy.....	21	12	4	5
Congenital tremors .....	1	1	..	..
	—	—	—	—
Subtotal .....	68	47	9	12
Noneffective				
Chorea .....	5	0	1	4
Parkinsonism .....	4	0	0	4
Dystonia .....	3	0	0	3
	—	—	—	—
Subtotal .....	12	0	1	11
	—	—	—	—
Grand total .....	80	47	10	23

the EEG pattern, and sustained often after cessation of the drug.

3. Tridione appears to be useful as an adjuvant drug in the treatment of grand mal seizures, though it does seem to aggravate some cases.

4. Both grand and petit mal of the idiopathic type were more responsive than those due to organic lesions.

5. Anticonvulsant action is indicated by its beneficial effects in cases of tetanus.

6. Tridione is of value in cerebral palsy, especially for reducing tension of the athetoid type.

7. Some forms of behavior disturbances are sedated by tridione.

8. Site of action for tridione appears to be the midbrain and (with some selectivity) the basal nuclei, an inference drawn from its failure to help patients with pyramidal lesions, while markedly benefiting extrapyramidal lesions, with the exception of chorea, parkinsonism, and dystonia.

9. Toxic side-effects in the use of tridione, in our experience, were rare in children,

were generally innocuous, and seemed readily reversible with cessation of the drug. More severe reactions were seen in adults.

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## BRIEF PSYCHOTHERAPY WITH ENURETICS IN THE ARMY

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In recent studies of adult enuresis most writers regard it as a form or a symptom of neurosis. Gerard(4), Levine(7), Lawrence(6), Wadsworth(10), Goldman and Bergman(5) emphasize that most enuretics are passive, retiring, self-depreciatory, sensitive, immature, and insecure. Backus, McGill, and Mansell(1), in a study of 277 cases in the British Army, found the largest groups (48%) to be timid, immature, and dependent. They classified the next largest group (27%) as of average personality but found them indifferent toward their problem, despite verbal protests, and showing a lack of firmness in previous handling. The rest (about 20%) showed varying degrees of aggressive feelings. Restriction of fluids, waking régime, physical conditioning, punishments (*e. g.*, the passing of sounds), and various drugs have been used in the treatment of enuretics. Psychotherapeutic techniques have consisted of simple reassurance, suggestion, hypnosis, "depth directive reductive" methods, and reeducation. Most writers emphasize that the prognosis is poor, especially in lifelong cases, and feel that treatment of the enuresis alone will, in general, be unsuccessful. This study presents the results of the use of brief psychotherapeutic measures exclusively with 25 enuretics in military service.

### CLINICAL MATERIAL

The present study consists of a series of 25 cases seen during a 4 months' period in the Consultation Service (mental hygiene unit) of the Quartermaster Training Center, Camp Lee, Virginia. During this period therapy was attempted with all enuretics referred except where severe mental deficiency or psychopathic personality trends made this impossible. In all cases a physical examination and clearance was given by the G. U. clinic of the Camp Lee Regional Hospital prior to the referral. After the initial psychiatric work-up therapeutic inter-

views were generally scheduled once every week until the enuresis ceased or it was felt therapy was unsuccessful. There were 22 white and 3 Negro soldiers. The mean age was 19.6. The Army General Classification Test scores, which approximate intelligence, ranged from 51 to 126 with a mean of 91.3. One hundred is the average score for the total military population. The average school grade completed was 8.7, ranging from fourth grade to second year college. A qualitative evaluation of the school adjustment of these men rated 14 poor, 8 average, and 3 good.

Six of the 25 were married. The greater majority performed semi-skilled or unskilled work prior to entering the service. Twenty-three, when first seen, had been in the Army less than 5 months (mean, 1.7); two had seen service for over 3 years. Twenty-one were in basic training when first interviewed. Approximately half the group came from rural areas.

In 22 cases the family history indicated emotional disturbances, and 3 were from "broken homes." Four fathers were alcoholic, 4 were enuretic, and in the other cases the mother or father was described as being "nervous." Most patients came from large families with the mean number of siblings 4.2. Fourteen had enuretic brothers and sisters. The average group frequency of bed-wetting was 4.6 times per week. Nineteen gave a history of continuous, life-long enuresis, and 6 showed a history of intermittent bed-wetting. The average number of treatment interviews was 5.4. There were 16 cases in which the treatment was considered successful, *i. e.*, the enuresis ceased; 4 cases showed improvement; and 5 cases were therapeutic failures. A follow-up study which was done in 19 of the 25 cases revealed that only one case showed a recurrence of nocturnal enuresis 15 days to 5 months after treatment.

TABLE 1

## CHARACTERISTICS OF 25 ENURETIC SOLDIERS

	Mean	No.
Age .....	19.6	
School grade completed.....	8.7	
AGCT .....	91.3	
Months of military service.....	1.7	
Frequency of enuresis, per week..	4.6	
Type of enuresis:		
Continuous .....		19
Intermittent .....		6
Treatment hours .....	5.4	
Interval between treatment and follow-up (months) .....	2.1 *	
Results:		
Successful .....		16
Improved .....		4
Failure .....		5

\* 19 cases.

## THERAPY

The main therapeutic consideration is that enuresis is an immature behavior pattern. The existence of this pattern is evidence that the patient has not experienced sufficient warm acceptance, firm support, and permissiveness in his relationship to significant adults. Lack of specific bladder training is a contributing factor. As a result he is dependent, infantile, and immature. Treatment, therefore, was planned and directed toward helping the patient obtain independence and maturity. Instead of concentrating on the acquisition of awareness and understanding of past and present behavior, the therapist created a situation in which the patient's emotional needs were satisfied. As a result the patient was stimulated to discard unsatisfactory behavior patterns, *i. e.*, his enuresis, and given the opportunity to function in an adequate adult manner. All artificial methods of conditioning such as restriction of fluids, waking the patient, etc., were discarded. Emotional and psychological conditioning was instead supplied. No attempt was made, at first, to have the patient become fully aware of his interpersonal relationships; instead, a situation was arranged by which he could work them out. The uncovering type of analytical technique was used only if the above approach proved unsuccessful and if it was felt that the patient was capable of comprehending his interpersonal relationships.

With the above theoretical considerations as a guide, the therapeutic plan was conceived in a definite and uniform manner so that almost identical explanations, interpretations, and emotional approach were used in all cases. In the first interview it was explained to the patient that no organic urological disorder existed. The patient's problem was discussed in terms of (1) inadequate toilet training in infancy; (2) some emotional involvement; and (3) an accepted habitual reaction. Attention was focused on the patient's experiences in living, and it was emphasized that the origin of his enuresis lay in these frustrating, unfortunate experiences. At the same time it was clarified that now he had the opportunity to understand and to modify his behavior, and that whether he continued to be enuretic or not was up to him. The therapist would help him. It was not a question of will-power or simple determination to stop, but an understanding of his attitudes toward bed-wetting. He was helped to realize that fundamentally it was childish, infantile, and an indication of immaturity. A general discussion was introduced regarding the "growing up" process and the natural problems and conflicts of adolescence. The patient was encouraged to realize that part of his problem had been the attitudes of his parents, perhaps in not dealing with him firmly, perhaps in not permitting him to grow up, etc. His army service was described as a real opportunity for him to become more mature because here he was treated as an adult. The decreasing incidence of enuresis as age increases was described and was used to point out that the patient would "outgrow" it eventually. Therefore, it was emphasized, if the patient made the most of his new experiences in the Army and honestly faced his problem, he would "outgrow" his bed-wetting now instead of later.

In succeeding interviews an accurate report of the frequency was obtained to check the patient's progress. The fact that he alone, and not his kidneys, was responsible for the progress of his condition was continuously impressed upon the patient. Until the enuresis began to decrease he was told he was failing to accept that responsibility, and it was emphasized that this itself was a



sign of immaturity. He was encouraged really to "take a stand" against allowing himself to continue an infantile habit, on the grounds that, when he did, this attitude would "protect him all through the night." After two or three weekly interviews the therapist began to take a firmer attitude and would even "scold" the patient. The therapist steadily increased his displeasure still emphasizing the patient's acceptability and capability until the enuresis stopped. When decrease in frequency began, it was met with praise and encouragement. The patient at all times was urged to develop a more independent way of living and was given specific advice or suggestions in handling various problems of army adjustment. No attempt was made to make the patient more comfortable; in fact, the teasing he received from men in the barracks and the pressure put on him by his commanding officer were not interfered with. The patient was urged to face the reality of these reactions as further reasons why he should cease wetting the bed.

Initially, there was some question about discharge. Most of these men were draftees, and in many ways they would have liked to be out of the Army. Emphasis was placed upon treatment rather than discharge. In fact, the patient was advised that the cure would take place more quickly and more easily in the Army than at home where the old influences and attitudes which had created his problem existed. Essentially, the therapist offered a new experience as a person with a scientific, friendly, understanding attitude. The patient was fully accepted as a person, yet the specific act of bed-wetting was not accepted. It was given a logical explanation, considered as curable, and then increasingly held up for criticism.

#### CASE ILLUSTRATIONS

**CASE I.**—This 18-year-old, white patient, referred during his second week of basic training, complained of frequent periods of weeping accompanied by violent body tremors and diurnal and nocturnal enuresis. History revealed intermittent bed-wetting since early childhood with increase upon enlistment in the Merchant Marine and in the Army.

His father, a Lithuanian, worked his way through night school and is now a prosperous business man. The mother is a native American; most of her life she has complained of being sickly. The patient has

2 younger sisters. He apparently identifies with the father but reluctantly tells of frequent quarrels with him.

After 1 year in high school he became involved in minor disciplinary difficulties and was transferred to a military academy which he detested because of the regimentation and discipline. After 2½ years of high school, he left against his father's wishes to go to work because he felt he should make some contribution to the war effort. He adjusted poorly to his work in a defense plant and was never satisfied.

After the patient joined the Merchant Marine in December, 1944, his enuresis became pronounced. He attributed it to weak kidneys and said he could feel the urine coming but could not hold it back. After his tour of duty at sea, he enlisted in the Army to ease the strain of waiting for induction. He had dreaded Army service since he was 15, and he felt that he would have less time to serve if he entered immediately. He looked upon the war as an unreasonable interference with his life plans. In basic training he found the discipline difficult to accept. He began to have both diurnal and nocturnal enuresis.

He was first seen by the clinical psychologist who was impressed by the patient's emotional infantilism and aggressive, hostile attitude. His AGCT score of 113 indicated that he was of above average intelligence. The soldier felt that the only solution was separation from the Army. He had "physical and mental problems." "Mentally," he said, "I don't want to be in the Army. I want to get somewhere. It's just being here. It seems a waste of time to me. I don't want to sit around and take orders. I never relaxed at all since this blasted war started . . . thinking over and over what's going to come of me. Sometimes I don't feel like living."

To the psychiatrist he complained bitterly of his inability to control urination. Questioned concerning the duration and frequency of his enuresis and about to burst into tears, he angrily blurted out that he did not see why he had to be in the Army. He desired to be home to complete his education and to further his social and economic ambitions.

His outburst was considered infantile and immature. He was told that he was in the Army, that many people do not like to be in the Army, and that others in the same position have made the best of it. It was pointed out that his resentment and hostility prevented him from functioning adequately. Instead of making the best of the situation, he looked upon everything as hopeless and useless. He was pitying himself and crying not only from his eyes but also from his penis. Various educational and technical training opportunities in the Army were brought to his attention. He recognized that his attitude was ruinous not only to his army career but also to his future life. At the end of the first hour he agreed to attempt to make a new adjustment.

In the second hour, 2 days later, he complained that the psychiatrist had not helped him, and that nothing he could say would be of any assistance to

him. Again it was emphasized that his attitude to army service could result only in injury to himself. As the discussion continued the patient became more excited, finally blurting out that regardless of what the psychiatrist, all the generals, and even the President of the United States might say, he would not change his mind about getting out of the Army. The only thing that would help him was to go home. At this point he was told clearly and firmly that, if this attitude persisted, it would lead only to difficulty with Army authorities and to disciplinary action. He suddenly recognized the gravity of his statements. He became markedly upset. He was encouraged to see how he could adjust to the Army and benefit from the experience. He was assured he was a capable, intelligent individual who could do an excellent job in the Army.

In the third hour, 1 week later, he was jovial, showing no anxiety or tension. He had thought over his discussion with the psychiatrist and said it was helping him to reorganize his attitude. He was no longer wetting the bed at night, although he still had to go to the latrine frequently during the day. He was interested in how his "mind affected his body" and was given a simple explanation. He still found training difficult, and arrangements were made to ease his program. He was praised for his excellent efforts and urged to continue them. The patient felt he would no longer have any difficulty.

He was seen 5 months later; he now had the rank of corporal, was assigned to a staff section, and was holding a responsible position. He was contented and emphatically stated he no longer had any difficulty. He was enjoying his Army experience and thought the discussions had helped him to "straighten out."

**CASE II.**—This 18-year-old, white soldier was referred during his fifth week of basic training. In the 3 preceding weeks he had wet his bed 2 or 3 nights each week. He gave a history of intermittent nocturnal enuresis until the age of 12. He attributed his difficulty to weak kidneys.

Prior to induction the patient had never been away from his home in Tennessee. He had a strong attachment to his family, especially to his mother, and was homesick. He expressed a fear that his parents were sick and needed him at home. (His father, a rigger of steel beams, can work only 4 months of the year because of a heart ailment. The mother suffers from pains in her left side.) He is third in a family of 4 boys and 1 girl, and says that his mother considered him her "best child." He was afraid that his brothers, who were recently discharged from the Army, were not spending much time with his parents.

The patient was drafted out of the eleventh grade of school. He had planned to be a newswriter or a commercial worker. His appeal for a deferment of induction was refused.

At the time of referral, the patient was making an adequate adjustment to military training but was concerned as to his ability to complete the training satisfactorily. He got along well with the other men and as they did not know of his enuresis it had not

been a source of embarrassment. His AGCT score was 91, indicating he was of average intelligence.

In the first therapeutic hour, the patient admitted being very homesick and worried about his parents' health. It was felt that his concern over his parents was a distorted expression of his own emotional needs and an over-attachment to them, and that his enuresis was related to these feelings. Since army life was strange to him he felt incapable of making the adjustment away from home, although in fact he was keeping up with the other soldiers in training. It was emphasized that others were having similar difficulties. It was pointed out that the Army afforded an excellent opportunity to learn to be self-sufficient, and he was assured that he was capable of getting along on his own.

In the second hour, he had decided that his parents were all right, that his concern was his own desire to be home and that he would have to get used to being away from home. He was commended for his realistic attitude and the "growing up" process was discussed.

At the third therapeutic hour, the patient stated he had wet the bed only twice in the preceding week. He had not been thinking so much about home and had not felt homesick; he was enjoying his technical training, had many friends, and participated more in the camp activities. The value of keeping busy in work and play was emphasized. His enuresis was again discussed in terms of "growing up" emotionally and taking more responsibility for his actions. He said he was more on his own now. He was commended for his improvement.

In the fourth interview, he proudly stated that he had not been enuretic in the last week. He felt confident that it would not recur. He was praised for the direct manner in which he faced his problem. For the first time he expressed a desire to be assigned for overseas duty, reasoning that the experience would be helpful.

Two weeks later he reported being enuretic only once in the preceding 18 days. Inquiry revealed that occasionally he "gets angry at the Army." He felt that he was overcoming his bed-wetting because he was keeping busy and had a different attitude toward the Army. It was suggested that he had been a little overwhelmed at first and that it was "human nature" to revert to childish attitudes at such times.

The patient was seen 2 months later. During this time he had not wet the bed and felt pleased that he had overcome his difficulties. He thought that the discussions had definitely helped him. He did not feel he needed further interviews and was looking forward to going overseas.

These 2 case histories are typical of the 16 therapeutic successes. Of the 9 remaining cases, 4 were regarded as improved. Of these 4 cases, 2 were transferred to another army post before treatment could be completed. A third patient who had not been enuretic for 2 months after cessation of treatment returned home on an emergency

furlough because of his mother's illness. During this visit his enuresis returned, and he was influenced by his mother to regard treatment a failure. He became convinced that separation from the Army was the only solution to his problem; this attitude blocked further treatment. The fourth patient, in addition to being enuretic, suffered from severe anxiety symptoms. Treatment, therefore, has been directed at the alleviation of his anxiety symptoms with only secondary attention to the enuresis.

In the 5 cases which were therapeutic failures, the underlying feature was the patients' intense emotional attachments to and dependence upon maternal figures. The wives of 2 patients accepted their husbands' enuresis; consequently the patients had little incentive to develop maturity and independence. Two others found the army routine intolerable because of their need for emotional support; they had no goal other than release from military service. The fifth patient, an 18-year-old of borderline intelligence, was extremely dependent upon a seductive, youthful mother. His anxiety increased to a degree that interfered with the performance of his military duties, and it was felt best that he return to civilian life.

#### CONCLUSIONS

This study represents the results of brief psychotherapy in 25 enuretics seen in the Mental Hygiene Consultation Service, Camp Lee, Virginia. There were 16 cases in which the treatment was considered successful; 4 cases showed improvement; and 5 cases were therapeutic failures.

The therapeutic plan was conceived in a definite and uniform manner so that almost identical explanations and emotional approaches were used in all cases. Enuresis was regarded as an immature behavior pattern, indicating that the patient lacked an emotionally satisfactory and appropriate relationship to significant adults.

A therapeutic situation was created in which the patient's emotional needs could be worked out and satisfied, thus permitting him

to develop maturity and independence. As a result the enuresis disappeared. At first there was no attempt to have the patient become fully aware of his interpersonal relationships; instead, he was allowed to work them out in the therapeutic setting. The therapist assumed the rôle of the significant parental figure.

To these immature, dependent individuals the army régime at first was an overwhelming, frightening experience wherein they were unable to turn to their lifelong emotional supports. The parental rôle of the therapist therefore became magnified. The aid given in easing the patient's training schedule or in modifying his burden in the Army increased his feeling of attachment. Although this program proved successful in the military setting, it is doubtful that it can be applied unmodified to civilian practice where the degree of control over the patient's daily life is not as great and where the patient can continue to maintain his usual sources of emotional supports.

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## CRITERIA OF THERAPY OF WAR NEUROSES<sup>1</sup>

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The Veterans' Rehabilitation Clinic of Mount Zion Hospital, San Francisco, is a full time, outpatient clinic. It is non-sectarian and charges no fees, being a special project sponsored by Columbia Foundation of San Francisco. During the first year of operation (July 1, 1944 to July 1, 1945) the regular professional staff consisted of an administrative director, a half time psychiatrist, and a full time psychiatric social worker; a volunteer staff of psychiatrists, psychologists and psychiatric social workers came in one evening a week.

During the first year, we treated about 240 veterans of World War II who had been discharged because of neuropsychiatric disabilities. Psychotherapy, usually weekly interviews, was often supplemented by group therapy, pentothal and by social and environmental "therapy," including coordination with various community resources. At the outset we were faced with the problem of how best to use our limited staff and facilities. It seemed to us better to study a few cases thoroughly than many cases superficially. We distinguished between psychiatric treatment *per se* and rehabilitation. By this latter, we meant in general psychotherapy dealing with the displacement of emotional conflicts from civilian to military life and vice versa. The emphasis was on doing the best possible job in a short time. Our aim was not superficial counselling or simple supportive therapy. On the contrary, we had the limited objective of dealing with the acute problems of the veteran, without attempting to cure the underlying personality disorders or long standing neurotic symptoms. This was possible by studying the effects of service experience and discharge, the conflicts created by new situations in the environment, such as family and employment, and evaluating psychody-

namically the veteran's reaction to these current situations in terms of his past experiences.

In the first 6 months, we received many veterans who had been in the service only a short time, had been out for a long time, and who suffered from extensive and prolonged neurotic difficulties. Gradually, we received more and more who had substantial periods of duty in combat zones, often in severe combat. For the most part, their problems were more acute or of more recent aggravation, and they came to us much sooner after their discharge. In the past several months, most of our patients have been veterans discharged on points, and whose serious problems broke out just prior to or after discharge.

In an effort to learn something about the adjustment of our patients several months after the termination of treatment, we began a follow-up study in the fall of 1945. We sent out a letter and a short questionnaire to 178 of the 240 veterans we had seen during the first year. The 178 selected for study consisted of those who were not currently in treatment, and with whom we had had no contact for several months. All of these veterans had been discharged prior to February 1945. The letter indicated our interest in knowing how the veteran was getting along, and whether he had any suggestions to make about the clinic. We offered him a choice of coming in, telephoning us, or returning the questionnaire. This was a one page form on which answers could be indicated by a check mark. Inquiry was made as to whether his condition was improved, the same, or worse, his present employment and his employment record since leaving the clinic, whether he was satisfied with his work, home and recreation, whether he had any problems now with which he wished help, and whether he was getting compensation and was satisfied with it. A stamped and addressed envelope was enclosed for the reply.

<sup>1</sup> Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From Veterans' Rehabilitation Clinic of Mount Zion Hospital, San Francisco, Cal.

Of the 178 letters sent out, 24 were returned unclaimed; 49 questionnaires were returned, often with an accompanying letter or page of comments; 22 veterans telephoned or came into the clinic instead of returning the questionnaire; and reports were secured about an additional 12 veterans through contacts with referring agencies. Information was obtained concerning a total of 83 veterans, or approximately half of those receiving the letters. There was personal contact with about one-third of these 83. According to information received, the status of the veterans was as follows:

Condition improved .....	45 (55%)
The same .....	32 (38%)
Worse .....	6 (7%)
Working—Yes .....	49 (59%)
No .....	17 (20%)
In school .....	11 (14%)
No information .....	6 (7%)
More than one job since termination of treatment.....	38 (46%)
(Ranging from 2 to 16 jobs)	

We asked as a separate question whether the veteran was running into any problems with which he would like help. We asked this partly as a check against the statement of improvement or satisfaction with the general situation. Most of the veterans who described themselves as improved supported this by indicating that they were working or were in school, were generally satisfied with their situation, and had no problems with which they wanted help. A few, however, described themselves as improved, yet the questionnaire as a whole gave a picture of general dissatisfaction and maladjustment.

A total of 63% of the veterans indicated on their questionnaires that they were satisfied with their work, recreation and home situations. At the same time, about one-fifth of these noted that they had problems with which they would like help. Of the 37% who were dissatisfied with some aspect of their home, recreation or work situation, one-half had problems with which they would like help, the other half did not. Some of these latter veterans made such statements as: "not enough problems to bother anyone with," or "I feel I should work them out myself. If I can't, I will come in to see you," or "I figure I'll never get over my nerve

trouble so I just take some medicine when I really need it. Otherwise I figure I have to help myself as best I can."

Of the total of 45 veterans who regarded themselves as improved at the time of follow-up, 80% also had been improved at the time treatment was terminated. The other 20% had shown no improvement during treatment but were better at the time of follow-up. Possible reasons for this are discussed below.

Of the 32 veterans who regarded themselves as unchanged at the time of follow-up, 69% also were unchanged at the close of treatment. The other 31% had shown improvement during the course of treatment and apparently this was not sustained.

Of the 6 veterans who regarded themselves as worse at the time of follow-up, only one had responded favorably to treatment.

In making this follow-up study, we hoped to learn something about the success or failure of our clinic in helping veterans. We hoped then to figure out why some of them improved and others did not, with the idea of developing from this knowledge some criteria for treatment in the future. This proved very difficult. In the first place, the number of veterans treated in our clinic was too small to give much statistical validity to our findings. As stated, our program had originated and was continued with the idea of working with a few veterans intensively rather than many veterans superficially. Because of the small number, it was hard to find common objective factors in our data. The ages of the veterans studied ranged from 18 to 46; their periods in the service from 3 months to 4 years; the interval between their discharge and their initial contact with us from 2 days to 3 years. Roughly, the average age was around 27-28 years; the length of service around 1½-2 years; the interval between their discharge and their initial contact, about 1-1½ years. More than one-third of these veterans had been overseas, a few of them in severe combat. About one-half (39) were getting compensation when they came to the clinic, and about half (37) at the time of the follow-up, although these two groups did not necessarily include the same veterans. There were some problems concerning compensation in

about one-fourth of the cases(21); usually this was a feeling of resentment at not getting compensation, or not getting enough, although the occasional veteran felt ashamed for receiving compensation.

Presenting complaints fell about equally into three general groups: (1) primarily emotional, such as irritability, inability to concentrate, self-consciousness, lack of interest or incentive, anxiety, unsatisfying sexual, social or vocational adjustment; (2) primarily physical; (3) a combination of emotional and physical. There were a few who were in rather acute states when they came to the clinic—pre-psychotic or psychotic, severe depression or acute anxiety; and a few who might be called behavior disorders without much anxiety. These included mainly those who came in to request assistance in appealing unfavorable discharges but were not interested in treatment.

There were several general points which seemed significant in a superficial survey of these cases.

1. Those who were "the same" at the time of follow-up, on the whole had a shorter period of treatment than those who improved. The median for the improved group was 8 interviews, for the unimproved 4 interviews.

2. The highest percentage of improvement was in the group showing psychosomatic and psychoneurotic symptoms; the lowest, in the group with primarily physical symptoms.

3. In some cases, a physical examination was necessary for reassurance and as a start for the discussion of underlying emotional conflicts.

4. Some kind of stability in at least one area of the veteran's situation—his home, his job, his friends—was favorable for improvement. Where there were no satisfactions in his environment, he was less responsive to therapy. For this reason, successful rehabilitation may necessitate psychotherapy which focuses in the beginning on the immediate, specific problems.

5. Many veterans made appreciative comments in their questionnaires on the work of the clinic. This seemed to confirm our own impression of the value of special clinics for veterans in the transition period follow-

ing their discharge to help them bridge the gap between army and civilian life.

In studying the cases, it became clear that the evaluation of improvement was not simple. The veteran might describe himself as better because of masochistic tendencies which made him express gratitude for even a slight amount of help. Some veterans had overwhelming dependency needs against which they were fighting, often by overcompensatory attitude of independence, and insistence that they had improved to the point where no further therapy was needed. Both of these factors operated not only in respect to the veteran's own statement of his improvement, but also in changes in the symptoms or complaints, which might superficially suggest some improvement. This occurred also when the veteran, at a point in treatment where he began to face the central problem, suddenly insisted that he was getting along all right and thought he should give his place in the clinic to someone who needed help more than he did. For instance, one veteran who came in with complaints of stuttering, sleeplessness and fatigue, terminated treatment after 5 interviews on the basis that he was going out bowling, dancing and on a round of activities which proved that he was no longer in need of any help.

It is true that many of these veterans had some difficulties of adjustment prior to service, but in almost every case the reaction to discharge, the sense of frustration or disappointment or guilt at having failed to make a satisfactory adjustment in the service, severely complicated the adjustment after discharge. This was especially important to soldiers discharged during the course of the war, for they were burdened not only with their personal sense of failure or guilt, but also with the critical or depreciating attitudes of family, friends and communities when they returned. Attitudes toward compensation reflected some of the conflicts about the service experience and discharge. "I don't deserve this" or "I should have this as a recognition of what the service did to me. I was all right before I went in." Unless these conflicts about the service and about discharge can be dealt with in some way in treatment, the veteran may well develop chronicity of symptoms. It was this aspect

of treatment which belonged peculiarly to the rehabilitation technique.

In studying the individual cases, we had to re-evaluate the statement of the veteran as to the effect of his contact with the clinic. In some cases, we were in full agreement with the veteran's opinion—whether he was improved, remained the same, or was in a worse condition than at the time treatment was terminated. In others, we could not agree with the subjective evaluation. For instance, one patient was suffering from severe masochistic tendencies which were only slightly affected by the fact that his fiancée abandoned him after his discharge. The help we could offer was very limited. We protected him against further humiliation by confronting him with reality: he was using his preoccupation with his unhappiness in the service as a tool to help him get back his girl friend. Actually, she was completely disinterested in him. After recognizing this, he was willing to give up this useless effort but his unhappiness remained the same and we referred him to a private psychiatrist. His gratitude for our help was exaggerated and covered up his resentment.

Our aim was limited in every case but it varied depending on the particular problems of the veteran. We would not refuse help to a paranoid patient if the initial survey justified the expectation of a quick improvement. For example, a patient was suffering from a feeling that the F.B.I. was after him because he had lied to the doctor in the service about his hearing and thereby succeeded in getting a discharge. He had presented a paranoid picture all his life; he never had friends and never accepted his deafness as being other than mild. After a few interviews, he was able to accept the fact that he wanted to be back in service; his fear of the F. B. I. was recognized as an expression of this fact. We made no attempt to discuss the underlying problems but helped him to find a job which would protect him sufficiently against involvements with people. He was still working one year after his last contact with us.

The problem of another veteran centered around his homosexuality. His "undesirable" discharge was a handicap in the matter

of employment or any other situation in which he had to produce his discharge papers. In addition, he was not reconciled with his strong homosexual impulses, felt extremely guilty, and asked for help with this problem. After a few interviews, he rid himself of his guilt with regard to the discharge and was able to change his vocational plan. This change was in accordance with his special abilities and in order to give him the greatest chance to sublimate part of his homosexual impulses. He calmed down and was able to accept his attachment to his mother, a rebellious attitude toward his father which was transferred to the Navy. After a very short time, he became interested in a masculine woman with whom he could share his work. He was able to establish satisfactory sex relations with this woman, decided to marry her and have a baby. They seemed to be getting along very well when they were seen 4 months after the termination of treatment, which consisted of 5 interviews over a period of 3 months.

In other cases we had to deal more thoroughly with the service experiences, the many justified complaints about officers and conditions in the army, guilt reactions to discharge, compensation, etc. These had to be correlated with the present conflicts in regard to the job, the family and community as well as the past conflicts of early childhood. An example is seen in the following case.

This veteran came to the clinic 2 years after discharge with complaints of depression and of dissatisfaction with his work. He had been in the Marine Corps for 2½ years, several months of which were spent in combat in the South Pacific.

Successful treatment depended largely on an understanding of the ambivalence about his job. He had spent some time in training for this work, which offered, on the one hand, permanent security; on the other hand, it required a good deal of initiative and responsibility. It became apparent that this particular job brought into focus the veteran's conflict between dependence and independence. The veteran came from a comfortable, middle class family; during his childhood, he had struggled to be the strong, competent, self-sufficient son. He went into the Marine Corps to prove himself. In treatment, the conflicts in his job situation were related to his service experience and to his childhood.

He was struggling also with intense hostilities directed against his wife. In treatment these were understood as an expression of his fear of being tied to her and also as an outlet for his antagonism.

against his present boss and his father in childhood covered up by his conscious hatred expressed toward the Marines and the government. After this he calmed down, could accept his present job, and when his company assigned him to a better position in another city, he made the decision without hesitation. This interrupted his treatment after 6 interviews, but he continued to improve after leaving.

Another veteran came to the clinic with a primary complaint of headaches, a secondary complaint of irritability. He had been discharged a year previously, after being in the service for almost 2 years. Prior to this, he had successful and satisfactory work experience in construction and as a longshoreman.

He had some similar symptoms in this pre-war period, when under considerable strain. However, he could always take a few days off if necessary and relax, go home and talk things over with his wife. In the service, he could not do this. There was a constant strain—conflict between men over him and men under him: men over him telling him he must see that the men under him got the ships loaded, even though there were neither facilities nor time, and without any recognition of the difficulties which might arise in such a situation. The officers did not have experience in this particular line, yet they asked the impossible—they asked him to make the men under him do what he knew was impossible. He went to the superior officer to ask for help in this situation of "being the meat in the sandwich"—being pressed between the men over and under him. The response was: "Look at all the work I have to do. I am crazy myself."

This soldier was assigned in the Aleutians with a pioneer outfit, the first to land in Adak, and he remained there 18 months. The isolation, the climate, and the feeling of no escape from these strains, aggravated his feelings. In addition, there was a mass neurotic atmosphere because of the climate and isolation. There was no way for him to handle his reactions, and his headaches became more severe.

His reaction to discharge was a mixed one. He had heard of all the things being done for discharged veterans, and because of what he had gone through, he expected to have some recognition when he returned. Prior to entering service, he had made arrangements to change to a civil service job and received his permanent appointment soon after getting into the Army. He was given a leave of absence. After his discharge, he expected to begin on this new job, but was told he had no status there and should go back to the waterfront. He felt he had been let down by the government.

He received a pension of \$11.00 a month, of which he was quite ashamed. He took it as a mark of the degree of service he was able to render. He was ambivalent about this pension: on the one hand, he felt he was entitled to more, on the other hand, he wanted to refuse it entirely. This conflict was reactivated each month when the pension check came. One month he wanted to have a wild party with it, the next month to buy a gift for his wife, another

to put it in the bank, and another to return it to the government. He did not want to be a civilian. He regretted being out of the service whenever he heard of the men in his unit being in active service. He felt that he had let them down and that he was cowardly for not going on. He felt guilty for being discharged, for accepting anything as a discharged veteran.

The treatment of this veteran had an initial focus on the specific job situation. This conflict was related to the service experience, with its intolerable conditions. The aggravation of the headaches came to be understood in terms of the frustration and resentments in the service, the fear of criticism and aggression there, all carried over into the reactions to discharge and the post-discharge situation. These emotional attitudes were correlated not only with the army experience and the present day realities, but also were related to childhood incidents. Before treatment ended, he had been able to get himself reinstated in his civil service position. His improvement, which was obvious when treatment was terminated after 3 months, was noted also at the time of follow-up.

These examples are in sharp contrast to others who resisted treatment altogether because of secondary gains derived from their illness. Such is the case with some of the returning veterans who derive a great deal of satisfaction from their status as veterans.

A typical example is that of a marine who distinguished himself at Guadalcanal where he volunteered for combat. He now was living in his memories and cherishing the Presidential Citation and the Purple Heart Award as proof of his accomplishments. He was restless and complained of "stomach trouble and headaches." He refused entirely to discuss his emotional conflicts and dropped out of treatment. He would not accept even physical treatment, justifying this in the following way; "the pain in my stomach lasts only a second, it comes in a flash. It would be of no help to take medicine because the pain disappears before I could swallow it." He was unable to relate himself to the therapist; it would have meant an admission of his insecurity, his fears and dependencies, and losing the heroic memories of combat.

In other cases, the physical complaints protected the veteran from a psychosis.

This is exemplified by the case of a veteran who was an aviation mechanic assigned to a ground crew of an air field. He became attached to a boisterous gunner whom he idealized since he could not pilot a plane himself. One day when the friend's plane returned from a flight, the patient saw his friend sitting in the gunner's seat as if asleep. When the patient tried to lift him from the seat, the body literally fell apart. Subsequently the patient developed fainting spells, was discharged, and returned completely bewildered, with symptoms of



shakiness, trembling and dizziness. He rationalized these as manifestation of his physical weakness and refused to continue treatment after 3 interviews. The psychiatrist was convinced that the veteran had to insist on an organic interpretation of his symptoms, because otherwise the underlying guilt and fear would have become conscious, with a possible danger of a psychosis.

We agree with the description another veteran gave in his follow-up letter, in which he marked his condition as "improved" but explained that this was not the result of his contact with our clinic.

This veteran came in with physical complaints only: headaches, vomiting, tingling of extremities, weakness. He came in 8 months after discharge; he had been in the service about 2½ years but was never overseas. He was sent in by a Veterans Administration physician, when physical findings were negative. From the beginning, he denied any interest in or need for other than medical care and was resentful for having been referred. He left after 6 interviews, in which the psychiatrist attempted some general explanation of the relationship between physical and emotional factors. On the follow-up questionnaire he wrote:

"May I suggest that the Veterans Hospital be definitely sure that there is nothing organically wrong with a man before committing him to a psychiatric clinic. I appreciate the interest the clinic has expressed but fully believe your time and mine could have been saved if the doctors at the veterans hospital would not assume a man to be a chronic complainer and emotionally or mentally at odds with society. Fortunately a doctor in civilian life has improved my health tremendously and saved me a possible expense of a few thousand dollars that a psychiatrist would want for a series of consultations, perhaps uncalled for. (Author's note: There was no fee at our clinic.) I feel the clinic is doing a good job in the cases where it is needed, but it can do harm in misapplication."

Unfortunately, not all such cases respond to physical treatment. We were satisfied if we could bring the veteran at least to an insight into the emotional roots of his physical complaint, then refer him to a private psychiatrist for further treatment.

One such veteran came to the clinic a year after discharge with complaints of pains in the back, tension, headaches and abdominal discomfort. These symptoms became acute after he had finished some highly specialized training in the Navy. He had anxiety symptoms for several years prior to his service experience, but was successful in his profession. It was obvious that he needed rather extensive therapy; after 3 interviews in which there was discussion of the overweening ambition that had driven him through the earlier years, he accepted referral to a psychiatrist for private treatment.

In a number of cases in which the veteran described his condition as unchanged, the treatment was unsuccessful because of severe demands, either economical or emotional made on the patient by the family.

A 22-year-old veteran had gone into the Navy in order to get away from an almost intolerable home situation. He got along very well for 2 years until stationed near his home, when he made frequent visits to his family. After his discharge, he was unable to hold any kind of job. He came to the clinic 4 months later asking for help in establishing a "goal" in life; he complained that he had no ambition and no interest.

Both parents had been chronic invalids for many years. Two older sisters were living temporarily in the home following unsuccessful marriages and were helping to support the parents. They expected to leave as soon as the patient could find a job. The family had lived on a marginal level for a long while, occasionally getting public assistance. The home was crowded and patient slept on a cot in the living room. There was constant criticism, complaining and bickering in the family, with everyone pushing the patient, who was the only son in the family to take over his "share." He realized his "share" meant full responsibility and he saw no future for himself. Because the veteran had no special skills, he anticipated that even if he could stay on a job, it would take all of his earnings to support the family and he would have no money for recreational or social activities for his own satisfaction. As long as he could not work, the sisters were helping out.

In another case the economic problems of the family were less important than the emotional ones in contributing to the chronicity of symptoms. This 30 year old veteran came to the clinic almost 1½ years after his discharge, with complaints of stomach and back pains, moodiness and worry. He had been in the service about 3 years. He and his brother had been assigned to the same outfit throughout this time and his brother was discharged shortly before the patient, both of them because of neuropsychiatric disabilities. The veteran was unable to do work of any kind because of his back and stomach complaints. He spent all his time at home, since he felt uncomfortable away from the family. His brother was supporting the family despite the loss of one hand in an accident.

This veteran had always lived with his parents. In fact, all of the children had remained in the home even after marriage. When the patient was assigned to North Pacific duty, the whole family moved from the Middle West to San Francisco, buying a rooming house in order to accommodate the families of patient's married brothers and sisters.

In treatment, the veteran resisted all discussion of emotional conflicts, even though he complained of his moodiness, worrying and dislike of having people around him. He resisted any discussion of the relationship between these and his physical symptoms. He asked for, and was given, a thorough physical examination but he complained that no

doctor was helping him. He thought his only help would come through increased compensation "until he got better." His mother came to the clinic several times asking for assistance in getting his disability rating increased, and emphasizing that the veteran was not well, was not able to work, and should be allowed to stay at home where the family could take care of him. The strength of the neurotic needs of the various members of the family probably would have counteracted treatment even if the veteran had continued coming to the clinic. He left after 8 interviews to return to the Middle West with his family.

In a similar way, the general environment rather than the immediate family situation may be unfavorable for a veteran's improvement. The veteran who is homeless, penniless, dislocated—"a displaced person"—usually needs general welfare services rather than psychotherapy. Yet the attitudes of the community toward this group are reflected in inadequate financial, recreational and case-work services for such individuals. This situation often constitutes a barrier to ultimate readjustment even if treatment is undertaken. We found this especially true for the veterans from minority groups, such as Negro or Chinese. Their problems were exaggerated by a return to the civilian community after a service experience in which the discriminations were less striking and where they found a temporary place for themselves.

In other cases there was a definite improvement at the termination of treatment but the veterans felt unchanged and could not acknowledge improvement, since they continued to have problems with which we could not offer help in our clinic.

A good example of this type was a veteran who returned from Africa with a severe depression as a reaction to an air raid in which all his buddies and his officer were killed. He suffered from strong guilt feelings since he believed that he had killed his officer himself. He could not verbalize such an idea but was constantly preoccupied by the following puzzle: the officer was killed by machine gun fire. The patient had been holding a loaded Tommy-gun at the time of the attack since he was guarding a warehouse. He had a complete amnesia for the event. With the help of individual and group psychotherapy, the amnesia was lifted; he remembered the details connected with the death of the officer. The latter was killed by Arabs who turned their machine guns on the men after the air raid. The veteran improved greatly after this was brought out in treatment and related to childhood conflicts, but his current conflicts with his wife, his fear of her pregnancy and other such fac-

tors reactivated his depression. This would require special care in a psychiatric clinic, whereas our task of eliminating the cause of his suffering directly related to the war seemed to be accomplished.

We had very few cases where the problem of compensation interfered with the treatment. This might be due primarily to the fact that the severe cases of compensation neurosis do not seek treatment. Also we had a firm policy with regard to compensation problems. We explained to the veteran that if we took sides on the problem of whether his disability is or is not, or to what percentage it is, service connected, this would seriously interfere with his treatment. Some veterans came in for the sole purpose of getting such a certificate in order to appeal their claims. In these cases, we preferred to refuse a certificate unless their treatment was well under way. In the few cases where we certified the patient's diagnosis and treatment, we never made a statement with regard to the service connection. Those who were interested in an appeal only were advised to seek the help of private psychiatrists, or other regular psychiatric facilities.

Almost all of our veterans received compensation. Of these, only 3 developed a real compensation neurosis with which we could not deal. A few of these who received no compensation were dissatisfied, but in no case was this an obstacle in their treatment.

The overwhelming majority of veterans preferred a good job and cure of their symptoms to compensation.

For quite a few veterans with psychopathic trends, our objective was the following: By relating their present antisocial feelings to the past, we made them conscious of the similarities of their service and pre-war experiences. We gave them credit for grievances against the Army or the government wherever this was borne out by facts, but followed up such an understanding with an intensive discussion of their childhood insecurities. Thus we succeeded in diminishing or eliminating their present rationalizations, protecting them and society against their becoming the victims of unscrupulous political propaganda.

In some instances, an immediate interference with the veteran's acute problems seemed imperative. Under the present emer-

gency conditions, many veterans are driven to acts which could be very harmful for their future. They may become involved with people who take advantage of their conditions while satisfying some immediate need. It is in such cases that clinics of this kind can render an invaluable service even if the help offered is only temporary and removes only the present danger.

A good example of this was a Wave who, as long as she was in the service, adjusted well; when she was discharged because of "nervousness" she couldn't bear being alone and worried about her husband, who was overseas for the past 14 months. She described herself as oversensitive and as getting herself into complicated situations because of her kindness and solicitude for people, with their consequent attachment to her. A family took her in to live with them. Their son came home from overseas and found that his wife was having affairs with other men and was ready to divorce him. The patient tried to console him and the boy began to get quite attached to her. The patient was an extremely insecure infantile individual who lost her father when she was 7 and became quite devoted to her stepfather, who drank a good deal. Without her husband she felt like a lost sheep and was on the verge of becoming involved with the son of the above family. She was ready to take care of him the way she took care of her stepfather, all this without the slightest awareness of the sexual implications.

After two interviews we were able to point out to her the meaning of her present situation, both in terms of her childhood and as a reaction to her own discharge. She became sufficiently frightened to accept our advice and assistance in leaving the home and making other plans. Of course, she continued to have problems even after her husband returned several months later.

#### SUMMARY

The rehabilitation techniques used in this Veterans' Clinic varied from case to case.

The success was not dependent on the type of psychiatric diagnosis but rather on the psychodynamics in each individual case. Effective help was given to veterans suffering from paranoid, homosexual or other severe conflicts provided these were closely related to the present situation. This could be achieved even in cases with serious pre-war problems. A thorough knowledge of the service experiences, the reactions to discharge and the immediate adjustment situation as well as the family background was necessary for intensive therapy. In other cases, the aim of treatment had to be limited to problems of readjustment, to giving immediate but limited support, or to protecting the veterans from harming themselves under emergency conditions. The earlier the veterans came after discharge, the better were the conditions for help. Where there was no stability in at least one area of the veterans' environment—his home, his job, his friends—rehabilitation became extremely difficult. In such cases the secondary gain from illness might become a serious obstacle. The same applied to some cases suffering from purely physical complaints covering up their need for dependency. Only 3 cases developed a real compensation neurosis.

The success of rehabilitation depended largely on the degree to which the disability was related to the present situation and also on our ability to discover the proper point of attack. Many veterans came in for treatment of their long standing or revived problems such as stuttering, alcoholism, homosexuality, psychopathic maladjustment, etc. Close analysis always revealed some new and hidden conflict, related to the present situation, which could be dealt with.

## A STUDY OF TACTICS FOR RESOLVING THE AUTISTIC BARRIER IN THE PSYCHOTHERAPY OF THE SCHIZOPHRENIC PERSONALITY<sup>1</sup>

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The schizophrenic patient seems characteristically different from other persons in reacting in relationships to others by the pattern of self-inhibition and emotional withdrawal, and it seems appropriate to refer to this mode of reaction as *the* schizophrenic pattern. When this pattern is the dominant one in the individual's personality functioning, his emotional adjustment to others is seriously disturbed. Other characteristic schizophrenic phenomena are also likely to be present in the form of active psychosis or the deteriorated state. When this pattern is combined in the personality organization with some other mode of interpersonal adjustment, such as the maintenance of an impersonal acceptance by others through the use of an obsessive pattern, a psychotic state may not develop, although the spontaneous emotional interplay with others characteristic of the emotionally healthy individual is minimal or non-existent.

From the time of Kraepelin the emotional isolation of the schizophrenic patient has been noted as a constant phenomenon of the schizophrenic illness and described by various terms such as autism or lack of affective rapport. As our clinical insights have increased in more recent times, this characteristic withdrawal has become of interest, not only as a phenomenological finding, but as a reactive pattern serving a definite function in the personality economy and, in the frankly psychotic patient, as perhaps the central dynamic feature.

How this pattern functions in maintaining the personality equilibrium of the schizophrenic patient may be considered briefly for a moment. The usual emotional interaction

which takes place between human beings seems to be lacking and the schizophrenic individual has not developed ways of living *with* others in terms of the real feelings that constitute *him*. Patterns of self-revelment and self-assertion are not well employed. The resentment of the influence which others are felt to exert upon him—sometimes fantastically exaggerated but basically true—provides the immediate issue for the schizophrenic alienation and gives positive form and color to the psychotic symptomatology; but this issue of "influence" would not arise without a feeling of ego-weakness in relation to the ego-strength of others. The patient feels vulnerable and inept, and ego-safety rather than ego-expression becomes his primary goal. This ego-safety is achieved by an active and automatic pattern of self-inhibition and withdrawal which raises an autistic barrier between himself and others, designed to conceal his vulnerability and resulting in the characteristic psychological isolation. By withdrawing from emotional contact with others, the patient not only achieves ego-safety but also succeeds in frustrating the attempts of others to relate themselves to him and so retaliates in a measure by sabotaging the effectiveness of the "influencing" pressures which he resents. His ego-safety and his retaliation—both accomplished by the pattern of withdrawal—are purchased, however, at the price of emotional frustration, loneliness and the negation of further ego-growth—growth which can only occur through emotional experiences with others. At the point when the frustration becomes intolerable, the psychotic patterns of fantasy-gratification swing into control—a secondary development occurring at the point of personality decompensation and leading to a new personality equilibrium, the schizophrenic psychosis.

Because this pattern of self-inhibition and withdrawal controls the possibilities of contact between the schizophrenic personality

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Carried out under a grant from the Scottish Rites Committee on Research in Dementia Praecox of the Supreme Council, Thirty-Third Degree Masons, Northern Jurisdiction.

and others, a thorough familiarity with the way it operates must underly any study designed to illuminate the possibilities of psychotherapy. Since the very heart of psychotherapy is the relationship between the therapist and the patient, the need for defining practical strategic objectives for these patients and effective tactics for attaining them presents a difficult and complex technical problem. Certainly, in general terms, the task of therapy would lie in the direction of finding ways by which the patient can gain sufficient courage to work out patterns of more spontaneous self-assertion and to develop a greater capacity for reacting emotionally *with* others.

The purpose of the present paper is to report a clinical study of the psychotherapeutic problem of the autistic barrier and some of the tactics which seem effective in resolving it and in assisting the patient to develop a more spontaneous pattern of self-assertion and a capacity for broader social participation with others.

#### DISCUSSION OF PROCEDURE

One investigative approach to this problem of the psychotherapy of the schizophrenic personality has been described in a previous study (Betz, 1946). In that paper the therapeutic tactics used in treating a series of 8 adult obsessive-schizophrenic patients whose emotional adjustment to others improved sufficiently to seem to warrant the termination of further active treatment were discussed. The characteristic personality pattern of each of those 8 patients was schizophrenic, but some contact with others was maintained by the operation of an obsessive pattern. The experience from this study seemed to indicate that the presence of the schizophrenic pattern was not an insurmountable barrier to the establishment of an effective therapeutic relationship. The course of treatment fell into three consecutive phases: (1) Timid rigidity or restricted spontaneity; (2) spontaneity of mutual interaction with the therapist; and (3) broadened social confidence and participation. The tactical approach in each phase was determined by cues derived from the patient, and the patient's responses in the direction of increasing spontaneity and participation or increas-

ing rigidity and withdrawal served as criteria for differentiating effective and ineffective tactics. Patients with obsessive-schizophrenic personalities were selected for study as a preferable group to frankly psychotic adult patients who might seem to offer the most direct approach to the therapy problem, for in the latter group, the pattern of fantasy-formation intensifies the autistic barrier, often to formidable degrees, so that the problem of therapy, still too little understood at its simplest becomes even more difficult and complex.

Another approach to this problem forms the background of the present report. This approach consists of the study in a treatment situation of a group of psychotic children whose clinical characteristics were described by Kanner (1943) under the heading "Infantile Autism". The outstanding characteristic of these children is their extreme emotional isolation from other people from early infancy. While they maintain a purposeful and seemingly intelligent relation to objects that do not interfere with their isolation, they are (Kanner, p. 249) "from the start anxiously and tensely impervious to people, with whom for a long time they do not have any kind of direct affective contact." Although these children may use others as tools to satisfy their physical needs or to show them how to do a task, other persons do not become meaningful to them as sources of emotional satisfaction. At best, these children maintain themselves *along side of* rather than *with* others in interpersonal contacts. The activities of these children in the world of objects in which they busy themselves are rather prominently patterned along obsessive lines, in the sense of a need for sameness and repetition rather than as means for maintaining acceptance or approval from others.

In the fall of 1944 an opportunity for the psychotherapeutic study of children of this group on an in-patient basis was made possible by Dr. John C. Whitehorn, director of the Henry Phipps Psychiatric Clinic of the Johns Hopkins Hospital who made one ward of the clinic available for their care. The in-patient study of these patients covered a period of sixteen months. During this period a total of 9 children, all boys, ranging in age from 4 to 10 years was admitted.

This study was at all times carried on in close collaboration with Dr. Leo Kanner, Director of the children's psychiatric clinic of the Harriet Lane Home, the pediatrics division of the Johns Hopkins Hospital. Both at the beginning of this venture, and in retrospect, it was felt that the chief advantage of having the children in the hospital over out-patient treatment was that it facilitated the intimate day to day contact between the child and his therapist. Incidentally, too, it enabled the therapist to observe other patients than his own and to have the benefit of observations by other personnel, including the nurses, on the case under his care. A more detailed account of the original objectives and organization of this children's ward is given elsewhere (Betz, 1945).

During the period when this ward was in operation, I had two of these children under my care, one for 6 months and one for 9 months. This background of personal experience forms the basis of the present study. The autistic barrier maintained by these children presented the central feature of therapeutic interest, and the present report is concerned primarily with a consideration of therapeutic tactics which emerged empirically as useful in resolving this barrier to a considerable degree and in enabling the children to participate with more spontaneity and confidence in relationship *with* others.

#### CASE PRESENTATION

The case to be presented is a boy of 5½ years, L. L., who was under my care for 8 months. During the first 2 months I saw him once a week as an out-patient in the children's psychiatric clinic. He was then admitted to the children's ward where he remained a patient for 6 months. At the end of this period his emotional adjustment seemed to have improved and he was returned to his home, as that seemed the best plan for his further developmental progress. During the time that he was in the clinic I spent about an hour with him daily, the time often being divided between morning and afternoon contacts, and between visits in my office and on the ward.

The first time I saw L. I found him to be an attractive, somewhat fragile-appearing large-eyed child who maintained a completely dead-pan expression. Subsequent investigations of his physical status revealed no abnormal findings. Although he seemed aware of my presence he showed no reactive response to anything that I said or did. The picture he presented was that of profound withdrawal and timid rigidity, with inhibition of bodily

movements which at times almost resembled cataplexy. He tended to stay in one place but when he shifted his position he did so in quick, tense little movements. He left his mother passively and accompanied me to my office with no show of initiative or interest. He did not speak or use any form of vocalization.

L.'s birth and early development—teething, sitting up, walking, etc. had been normal. He had said a few words at about one year. His emotional difficulties had first become evident to his family after his first birthday when he began to starve himself, seemed listless and acted as though he were deaf. He became extremely apprehensive. At 2 the family doctor suggested psychiatric consultation but this advice was not followed out. By the age of 4 he "lived in a world of his own." At times he seemed dazed. He showed no interest or participation in the activities of other children. At 4½ obsessive patterns appeared and his fearfulness became less marked. At that time the withdrawal and apathy which characterized him at the beginning of my contacts with him had become the central feature of his condition.

*Course of Treatment.*—The course of treatment of this child during the 8 month period seems to fall into three consecutive phases similar to the sequence of phases found in treating the adult group of patients with obsessive-schizophrenic personalities. It seems useful to present the course of this patient's treatment under the same headings.

#### PHASE I. TIMID RIGIDITY OR RESTRICTED SPONTANEITY

(Approximate duration: 3 months)

During the first 2 months of my therapeutic contact with L. (as an out-patient), he at no time showed the slightest flicker of reaction to me as a familiar person. On his first visit he sat stiffly on a chair placed before a table on which were some doll figures and small toy cars. He showed no spontaneous interest in or even awareness of the toys or anything else in the room. After a period I assumed the initiative and began some exploratory manipulation of the toys, watching his facial expression closely as I did so. His dead-pan expression was unwaveringly maintained as I tried out humorously playful maneuvers with the dolls, tenderly affectionate approximations of one doll to another, combining the dolls as passengers in the cars, and other such situational variations. When, by chance, I began to knock the mother and father dolls over with a toy car I caught the first flicker of response. A more animated light appeared in his eyes as I continued this game in a repetitious way, saying "knock the mamma doll over," "knock the papa doll over," "bang," etc., as I did so. Although his general attitude and posture did not change, I got the impression that some empathy with this play was occurring.

During his subsequent 6 visits to my office, such play with toys formed the sole framework of the therapeutic contact. L.'s reactions, however, gradu-

ally began to expand. Still showing no more response to me personally than previously, he began to participate in this play, at first timidly touching the toys with one hand, later with a certain amount of gusto. He began hesitatingly to push the toy car toward a doll himself until it toppled over. His facial expression became more intense and he began to whisper under his breath "fall down" and "crash" as the doll toppled. However, not until the day of his arrival at the clinic for admission did he first show any change of expression on seeing me, when he gave me a fleeting but rather pleased look of recognition.

During the first week in the hospital it became evident that his dead-pan expression did not altogether represent indifference and that at times he watched the other children attentively. He seemed to be experiencing intense inner feelings which he was unable to assert and which he inhibited strictly. He was also observed to resort to physical flight to avoid situations which frightened him. He tended to sit timidly in certain limited areas on the ward and moved about only within a rather narrow sphere. He submitted passively to the ministrations of the nurses and held himself away from contacts with the other children.

*Therapeutic Rôle.*—From the beginning, my therapeutic orientation toward him was to relate myself to him at any point of spontaneity which he seemed to show, however slight. My first objective was to provide a relationship for him in which his need for protective inhibition of his feelings might be minimized and a more spontaneous expression of these feelings, whatever they were, risked. In line with this objective, my procedure while with him was to maintain as keen an alertness as I could to his moment-to-moment reactions, and to be guided by them as to what kind and degree of participation on my part he might accept. That is, the child became the focal point of the relationship and I adapted in any ways which seemed to put me *with* him, so that he had some experience of "togetherness" while with me, in contrast to his habitual exclusive isolation and aloneness.

*Therapeutic Response.*—In response to this therapeutic approach, the patient's first month in the clinic was characterized by a diminution of his inhibitory patterns and a decrease in his timid rigidity in limited areas, notably first in his relationship to me. He began to smile when he saw me and to relax sitting on my lap while I rocked him. After becoming receptive to me in these ways, he began to express some affectionate interest in me, seeking to sit on my lap, putting his arms around me, etc. With the other persons on the ward he was still predominantly timid and stiff, although less so than at first.

## PHASE II. SPONTANEITY OF MUTUAL INTERACTION

(Approximate duration: 3 months)

This beginning capacity for some reciprocal relationship with another person gained rather rapid momentum during L.'s second month in the clinic.

He became very animated and began to look like a merry little boy. Particularly marked was his increase in physical freedom and action. He became interested in slamming doors, in a tentative and timid fashion at first with an eye on the nurses later, apparently gaining courage from their permissive attitudes, with great vigor and daring. He began to use me as an animated trapeze, climbing over me somersaulting with my help, soliciting being swung in circles by his arms, etc. . . . He became more freely assertive of his feelings, on occasion showing anger toward the other children and some jealousy of my notice of them. He began to show more aggressive behavior both toward the other children and toward me, pushing or hitting out, at times cautiously and at other times more boldly. He also began to chatter more, some of his chatter revolving around the phrase "bad boy" which he seemed eager to have register, as though he were experiencing and attempting to reveal a certain sense of "I-ness." At times there was some evidence of an obsessive pattern, with concern about setting the furniture or toys just so.

*Therapeutic Rôle.*—As these changes in his behavior appeared I responded with steady, permissive attitudes. I continued to take my cues from him and this involved, at this time, a good deal of participation with him at a play-fellow level. Some contact at the verbal level was also now possible, by repeating with him his own sounds and phrases much as one talks with a young infant. He responded to this procedure with delight, particularly to my use of the words "bad boy" and seemed to assume some definite groundwork of understanding between us.

*Therapeutic Response.*—L.'s affectionate interplay with me now became more matter-of-fact and less the central feature of our relationship. He seemed more independent and more secure in his own individuality, showing, for instance, less jealousy of my attentions to the other children. He appeared less tense and the pattern of inhibition and withdrawal was much less in evidence. His behavior became very mischievous and he delighted in acts which would tease the nurses. He became very attached to the head nurse whom he called by name. He was very playful with her and actively solicited her companionship. He now ceased to avoid the other children and for the first time engaged in parallel play side by side with them. He was very lively and jabbered constantly. Participation with me at the level of physical activity diminished and he engaged me more in verbal gymnastics, going over with me and having me repeat to him a widening range of phrases.

During the fourth month in the clinic he began to show an active increase in his perceptive capacities. He seemed fully at home in the time-schedule of his activities and moved freely and appropriately from place to place. He also, for the first time spontaneously addressed me by name. His capacity for absorbing and participating in what was going on around him seemed to have reached a point where it was felt that he might benefit from some contact with a less sheltered environment. Arrangement

were made for him to attend a neighborhood nursery school in the mornings. Here, his timid rigidity reappeared during the first few days of his attendance, after which it subsided and the more recently developed spontaneous patterns again asserted themselves.

### PHASE III. BROADENED SOCIAL CONFIDENCE AND PARTICIPATION

During this final period in the clinic, L.'s self-dependence and self-assurance continued to increase. Although he was still full of mischief, he developed more of a sense of what was considered acceptable and what was not and showed some preparedness to conform and to enjoy doing so. He became more serene and seemed quietly happy. The nursery school reported continued gains in his spontaneity and stated that, except for the continued lag in his use of speech, watching him play with the other children, one would think only that he was a healthy, normal little boy.

Since the schizophrenic pattern of autism had largely subsided, and since the remaining problem was largely one of a lag in emotional maturity which did not permit him to make an appropriate social adjustment to children of his own age group—a problem which time and life experiences might be expected to resolve more effectively than continued intensive psychotherapy—he was discharged from the clinic at the end of his sixth month and returned to his home. I have seen L. in my office at infrequent intervals during the succeeding 12 months. He seems to be maintaining the gains that he made and to be an active participant in the family life. To what degree he will be able to overcome his emotional lag, it does not seem possible to predict.

### DISCUSSION

The present case seems to illuminate some of the problems which confront the therapist in treating the patient who maintains an autistic barrier between himself and others as his dominant mode of interpersonal adjustment, and to provide an empirical basis for a discussion of effective therapeutic tactics for dealing with these problems. One noteworthy factor which was evident in this case and also in the treatment of the adult obsessive-schizophrenic group is that, while the autistic patient is not prepared to express reactions toward others or to participate with the therapist at the beginning of treatment, some capacity for *receptive* response in certain areas is present. This observation would seem to indicate that it is the task of the therapist to assume the initiative in negotiating a significant contact, by some tactical approach geared to the particular patient's

receptive channels. Absolute passivity on the therapist's part with a view to awaiting a spontaneous participative gesture from the patient is likely to develop into a situation of indefinite therapeutic stasis during which that particular therapist may be shuffled off by the patient as an inconsequential source of help for him.

The therapist's tactics in assuming initiative then become a prime technical consideration. Clinical experience with the use of intellectualistic, rationalistic approaches to these withdrawn patients, and with directive, advisory maneuvers testifies to the non-receptivity to such therapeutic tactics and has led to a general medical attitude of pessimism with regard to psychotherapeutic possibilities. In the case of a child, such as L., the inappropriateness of such approaches is self-evident, and it is in part because of this very fact that the study of such a child provides a fruitful field for therapeutic investigation. The experience with L., as well as with the adult obsessive-schizophrenic group, illustrates another tactical approach of considerable therapeutic effectiveness notwithstanding the dominant autistic barrier. This is to permit the patient, as represented by his own moment-to-moment attitudes and reactions, to be the pivotal point around which the therapeutic relationship develops. To do this the therapist needs deliberately to avoid assuming the pivotal role as represented by his professional status or his clinical "insight", however accurate, and leaving the burden of mobility and adaptation to the patient. Rather, he takes his cues from the patient and by adapting his responses accordingly is enabled to maintain an adjustment of the maximum intimacy possible at any one time to the patient. This procedure is based on and reflects a consistent, underlying attitude of interest in *unconditionally* understanding the patient as he is and feels at the moment as an end in itself, without the injection of further objectives such as giving, insight, evaluating, challenging, moralizing, disciplining, etc.. When the therapist approaches the patient in this way, with the attempt simply to be an understanding person he does not seem to be felt as coercive or a threatening "influence". Actually, what form his understanding takes seems of minor



therapeutic significance in comparison with the fact that he is trying to be understanding. Empirically, the withdrawn patient whether child or adult has been found receptive to such a tactical approach and through it begins to have a rudimentary experience of being in relationship *with* someone.

As this rudimentary experience of being in relationship with another person is maintained for the patient over a period of time, the therapist's significance to the patient expands and changes. Interestingly enough, as exemplified in the present case, the therapist's effectiveness comes to lie in the relationship the patient forms to him as a *person* rather than primarily as a physician concerned with sickness and health. He is no longer just a representative of the general world of people to be shut out, but becomes a special figure of personal emotional significance whose individual attitudes and reactions as they are expressed to the patient becomes a part of the latter's own life experience. The patient himself thus begins to shift the therapist into a pivotal position and to react in ways *expressive* of what this new person in his life means to him. His habitual patterns for dealing with people are no longer appropriate to this new experience and he begins to experiment with new modes of functioning. Through this newly established emotional contact, however slight it may appear in comparison with contacts between two emotionally healthy people, the patient begins to have the growth-potential experience of feeling himself as a participant within a real and active human relationship. Some reciprocity of response now begins and some mutuality of spontaneous interaction.

At this point the autistic barrier between the patient and the therapist is resolving and the transition into a second phase of treatment occurs. Now the therapeutic objective lies in assisting the patient toward the development of a more secure sense of his own capacities as an individual and toward a greater confidence in expressing his feelings spontaneously and responding from within himself to the feelings and attitudes of others. More than ever at this point the therapist needs to permit the patient to experience him as the human being interested

in people—and in this particular patient—which he is, and to take care that his professional status does not serve unwittingly as a barrier or jeopardize the therapeutic effectiveness of the developing relationship. With a child, as in the present case, this is technically easier to do than when dealing with an adult, since it is natural to enter freely into the child's activities and to participate by more direct and intimate contact in accordance with the child's needs. With adult patients more restrained but equally participative technics are necessary to achieve similar ends. For instance, by his manner of respect for the patient's feelings whatever they may be, including those toward the therapist and for his courage in clarifying them and using them as they are evoked, the therapist can provide the patient with the interpersonal experience he needs for his emotional growth and the development of his capacities for forming relationships with others.

The patient's response to this interpersonal experience with the therapist is that of a growth in his own self-dependence and self-esteem. He becomes more secure, more freely assertive and less timid and rigid, not only with the therapist but soon with other individuals as well. While other problems may remain as residuals of the patient's longstanding emotional difficulties, the autistic barrier which previously constituted the central problem is no longer the primary obstacle to the patient's better emotional adjustment.

It will be noted that data with regard to the family background of the patient presented in this report have been omitted and that a consideration of etiologic factors has not been included in the discussion. This has been done deliberately with a view to highlighting a point which seems particularly important in the psychotherapy of the schizophrenic personality, namely that *what* the therapist understands about these factors primarily serves to satisfy his own scientific curiosity and in itself is of less therapeutic value than his function as a person who is attempting to be understanding.

#### SUMMARY AND CONCLUSIONS

This paper is concerned with the psychotherapeutic problem of resolving the autistic

barrier maintained by the patient who negotiates his relationships to others primarily by means of the schizophrenic pattern of self-inhibition and withdrawal, a pattern which also precludes any ready establishment of effective emotional contact with the therapist. The case of an autistic child who maintained such a barrier in almost pure culture is presented. The tactical approaches used in the therapy of this child and his responses are described, and certain procedures which it is felt may have general validity in the psychotherapy of the schizophrenic personality are discussed. From the experience with this case and others it seems possible to draw the following conclusions:

1. The presence of the schizophrenic pattern is associated with an incapacity for spontaneous participation in relationship *with* another person, including the therapist. However, some capacity for *receptive* response to certain kinds of approach by another person is present.

2. The therapist, as the person whose immediate objective is to establish emotional contact with the patient, must assume the initiative in negotiating this contact.

3. The patient, in terms of his moment-to-moment attitudes and responsiveness, must be accepted by the therapist as the pivotal point around which the therapeutic relationship forms. The therapist who maintains expectations that his own attitudes and insight as the doctor will be accepted by the patient as the pivotal point around which to revolve is likely to find himself in a situation of therapeutic stasis.

4. When the therapist approaches the patient with the unconditional objective of attempting to be understanding of what and how the patient feels at the moment, some significant contact with the patient can be expected. What form the therapist's understanding takes seems less important ther-

apeutically than that he is attempting to be understanding.

5. As the patient accepts the therapist's approach, however limited the area or degree of response, he is beginning a rudimentary experience of relatedness *with* another person.

6. As this experience of relatedness between patient and therapist is maintained, the therapist gradually becomes an emotionally significant *person* to the patient.

7. The patient now begins not only to respond to the person of the therapist, but to express feelings toward him and interest in his reactions. That is, the patient is no longer just receptive, but the rudiments of assertiveness and reciprocity appear.

8. Spontaneous mutual interaction between the patient and the therapist increases and with it the resolving of the autistic barrier in the therapeutic relationship.

9. Through this experience of relationship with the therapist, the patient's self-dependence, self-esteem and general spontaneity increase.

10. Other persons in the patient's environment besides the officially designated therapist may be serving a similar therapeutic function, as acceptable persons with whom the patient may develop spontaneity.

11. Broadened social participation in relationships with other persons than the therapist begins, as the patient's growing confidence in himself as a person diminishes his need for the protective isolation which he had previously insured for himself through the schizophrenic pattern and the autistic barrier.

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## PROCEEDINGS OF SOCIETIES

The following membership changes recommended by the Committee on Membership and approved by Council were adopted at the annual meeting of the American Psychiatric Association in New York, May 19-23, 1947.

### APPOINTED TO ASSOCIATE MEMBERSHIP, MAY 1947

Allen, Arnold, 36 Oak Lane, Primos, Pa.  
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### REINSTATED AS AN ASSOCIATE MEMBER, MAY 1947

Erwin, Herbert J., 11 N. Jefferson Ave., St. Louis 13, Mo.

(1)

### APPOINTED TO MEMBERSHIP, MAY 1947

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Astrom, Algot, Logansport State Hosp., Logansport, Ind.  
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Baker, James L., U. S. P. H. S. H., Fort Worth, Tex.  
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(7)

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(2)

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(2)

## APPOINTED TO HONORARY MEMBERSHIP, MAY 1947

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(1)



## CASE REPORT

### SUCCESSFUL TREATMENT OF A CASE OF PHENOBARBITAL POISONING WITH PICTROTOXIN

SAMUEL LIEBMAN, M. S., M. D., AND L. WAYNE JOHNSON, B. S., B. M., WINNETKA, ILL.

We are reporting the successful treatment of a case of phenobarbital poisoning in a chronic alcoholic, who took about 10 grams of phenobarbital in a suicidal attempt and received 2,526 mgms. of picrotoxin. We believe this to be the largest reported dose of picrotoxin used with recovery.

The use of picrotoxin in barbiturate poisoning has been reviewed by B. W. Billow (1); J. Dorsey (2); D. L. Burdick and E. A. Rovenstine (3); C. J. France, M. B. Barnett, and F. F. Yonkman (4); and A. Anderson (5).

#### CASE REPORT

Mrs. R. H., 34, a chronic alcoholic, was admitted to the North Shore Health Resort, May 8, 1947, in coma for 18 hours. After recovery, she told us she had taken about 100 one-and-a-half grain tablets of phenobarbital in a suicidal attempt while drinking one and a half quarts of whiskey. She had received no treatment prior to admission.

Physical examination revealed a well-nourished, white female, who was comatose and appeared moribund. Her pulse was 110, weak and thready, temperature 101.6 rectally, respirations 24, shallow and intermittently of a Cheyne-Stokes type, blood pressure 110/70. E.E.N.T., heart, lungs, and abdomen were essentially negative except for the urinary bladder which was distended to above the umbilicus and yielded 1,400 c. c. of urine on catheterization. Neurological examination revealed dilated pupils, normal fundi, normal cranial nerves, active and equal reflexes bilaterally, with no pathological reflexes.

Laboratory findings included normal urine; R.B.C. 2,650,000; Hb. 12.8 grams; W.B.C. 9,850; differential count—polymorphonuclears 90%, lymphocytes 10%. Kahn test was negative. The spinal fluid and electrocardiogram were both normal.

During the first 24 hours of hospitalization the patient developed rales in both lungs for which she was given 30,000 units of penicillin every 3 hours, in addition to continuous oxygen. One thousand c.c. of 5% dextrose in normal saline was given intravenously. The patient was turned frequently from side to side, and suction was used to maintain an adequate airway throughout her comatose state. She received 16 c.c. of metrazol, 7½ grs. of caffeine sodium benzoate, 1½ c.c. of coramine, 120 mgms. of benzedrine sulfate, and 330 mgms. of picrotoxin. The picrotoxin, metrazol, and benze-

drine sulfate were all given in the rubber tubing of the intravenous set after adequate sterilization of the tubing. The patient's respirations became less shallow and more regular; her blood pressure rose to 125/80; temperature and pulse did not vary much. She did not respond to any stimuli.

During the next 24 hours, she continued to receive oxygen, penicillin, 3,000 c.c. of fluids, with vitamins added, intravenously, frequent turnings, and suction. These procedures were continued throughout her course of treatment. It was decided that picrotoxin was the analeptic of choice. It was given intravenously in 15- to 30-minute intervals in doses of 5 to 7 c.c. and contained 3 mgms. per c.c. She received 465 mgms. of picrotoxin during this 24-hour period with no change. Her respirations remained of good quality.

At the end of 59 hours and 1,455 mgms. of picrotoxin, the patient yawned and developed a strong grasp of reflex. There was still no response to stimuli.

After a total of 71 hours and 1,851 mgms. of picrotoxin, she responded to commands and repeated her name. Four hours later, after 1,881 mgms., she answered questions intelligently but was still very lethargic. She then had a short grand mal seizure, and though not excessively depressed following it, she again lapsed into coma.

During her fifth day of coma, she received 501 mgms. of picrotoxin and was still very lethargic but again responded to questioning.

At the end of 131 hours, she was wide awake and received 2,526 mgms. of picrotoxin. The patient's temperature returned to normal. Intravenous fluids, oxygen, and penicillin were discontinued.

The patient was fully recovered from her comatose state on the next day. The only complication was a tender left sciatic nerve, which was believed to be due to a toxic neuritis and improved steadily under conservative management, including large doses of vitamin B complex and diathermy.

#### SUMMARY

A case of phenobarbital poisoning in a chronic alcoholic is reported, in which the patient is believed to have taken about 10 grams of phenobarbital and was comatose for 109 hours and lethargic for 149 hours. She received a total of 2,526 mgms. of picrotoxin. We believe this is the largest reported dose of picrotoxin used in barbiturate poisoning with recovery of the patient.

## BIBLIOGRAPHY

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## COMMENT

### PAX MEDICA

We are told that science knows no national boundaries. For the most part we believe this to be true. All will not be well with science until it is one hundred percent true. Painful exceptions, however, are not unknown. Distortions of scientific data and reasoning in Germany under Nazi domination were incorporated in the credo of the state. Scientific oddities have also emerged from behind the Iron Curtain.<sup>1</sup>

But least of all sciences can medicine be hemmed in by political boundary lines, or its thinking and planning determined by sectional interests, narrow or wide. Having in mind the traditional ethical goals of medicine, and having in memory the shining examples of attainment of those goals by doctors in the armed forces in many theaters of war, the crimes of certain German physicians in the recent war are so shocking as to be almost incredible. A contrasting picture of scientific integrity and steadfastness was furnished by the doctors of Norway<sup>2</sup> who refused to be stampeded by the Quisling and Nazi bullies.

The credo of medicine implies that doctors of all countries should find it possible to live and work together with a reasonable measure of harmony and to agree upon such fundamentals as patient and honest observation and research have been able to establish. The art of living and working together comfortably is the essence of mental hygiene, and it seems not too much to expect that those who build upon the Hippocratic foundation should set an example in social living and collaboration. We remind ourselves, however, that the medical profession, after all, constitutes only a cross-section of the partially educated and imperfectly self-disciplined sector of the community and shares the strength and the weakness of its lay compeers.

<sup>1</sup> *E.g.*, MacArthur: A Glimpse behind the Curtain. *Genetics in the U. S. S. R.* Am. J. Psychiat., July, 1946.

<sup>2</sup> *Vid.* The Gjessing Affair. Am. J. Psychiat. (Comment). Jan., 1942.

This reflection may mitigate somewhat the disappointment that must have been felt in all countries in the proceedings of the first meeting of the World Medical Association in Paris, September 18-20, 1947. There was so much profitless controversy that not all the important items on the agenda could be dealt with as planned, for example, consideration of the relationship between the state and the doctor. Much time was consumed in wearisome arguments over the Articles and By-laws. An unpleasant feature of the meeting was the bloc voting by the countries of South America, which did not lessen the tenseness in the atmosphere. At one critical point all the delegates from these countries walked out of the Chamber, but later returned. The British Medical Journal remarks editorially (Sept. 27, 1947) that "it seemed that the meeting was beginning to initiate some of the worst features of the U.N.O."—a fairly severe indictment.

The W.M.A. adopted as one of its objectives "To promote world peace," but as the B.M.J. observes, "peace at the meeting itself was on many occasions preserved with difficulty." But despite the unfortunate aspects of its initial meeting, the World Medical Association has come into being. At its birth, 48 countries were represented. English, French, and Spanish were declared to be the official languages. German delegates will not be admitted to the W.M.A. until the medical profession of Germany has registered its condemnation of the war crimes of German physicians.

The delegates to this first assembly did not accomplish all that they might have done, but a beginning has been made, and it is to be assumed that the W.M.A. will become a potent influence in promoting the social as well as the physical health of all mankind. The material means of the first year's organization and operation are guaranteed by a gift from friends of the American Medical Association of \$50,000 a year for five years. It is fortunate that the name, "World Medical

Association," was adopted, and that the term "international"—currently all too suggestive of disunity—was not allowed to creep into the official designation.

The purpose of this comment is to say that medicine needs more mental hygiene. It is needed not only in the curricula of medical schools as an instrumentality that doctors may use in dealing with patients; it is needed in the lives of doctors themselves. It is one of those things that can be taught best by example. It is needed in the organization of hospital staffs and of medical societies, faculties, and bodies of all kinds. And it will be

indispensable in the activities of the World Medical Association. There should be at least one organized body with world representatives who can deliberate together, form policies, and make decisions by peaceful means in an atmosphere of freedom from fear, suspicion, and self-will.

To promote world peace means to ensure peace of mind to the people of the world. Peace of mind and equanimity, the *aequanimitas* that Osler preached, signify healthy-mindedness. And healthy-mindedness on a world scale, if such were ever possible, would be the basis of decent social life on this planet.

## IMPORTANT NOTICE

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### CHANGE OF DATE AND PLACE OF 1948 ANNUAL MEETING

Owing to circumstances entirely beyond the control of the Association and of the local Committee, it has become necessary to postpone the Association's visit to the Pacific Coast.

A careful canvass of the country indicates that the only large city with facilities available at a suitable time is Washington, D. C. Accordingly the Council has voted to hold the 1948 meeting in Washington May 17-20, 1948 inclusive.

The Headquarters Hotel will be the Statler, and a sufficient number of rooms have been guaranteed by the Statler and nearby hotels to assure ample facilities for the fellows, members and their families.

WINFRED OVERHOLSER, M. D.,  
PRESIDENT

## NEWS AND NOTES

INTERNATIONAL CONFERENCE ON PSYCHOSURGERY.—The date set for the International Conference on Psychosurgery to be held in Lisbon has been changed to the first week of August, 1948. This change has been made to give those who wish to attend the International Congress on Mental Health to be held in London later in August an opportunity to do so without loss of time.

WALTER FREEMAN, M. D.

*Chairman, United States Committee.*

DR. WHITEHORN LECTURES IN STOCKHOLM.—During his vacation in Europe this past summer, Dr. John C. Whitehorn, Director of the Henry Phipps Psychiatric Clinic of the Johns Hopkins Hospital, visited Stockholm, where he had been invited to give a series of lectures.

DR. BOWMAN ON OFFICIAL VISIT TO CHINA.—The World Health Organization invited Dr. Karl Bowman, Medical Superintendent of the Langley Porter Clinic, San Francisco, to proceed to China to assist in the establishment of the National Neuropsychiatric Institute at Nanking. Dr. Bowman left for China by air August 12. It is estimated that his mission will require about three months.

DR. BURLINGAME'S IMPRESSIONS OF CONDITIONS IN EUROPE.—In reply to a request for his impressions from recent visits to Britain and the Continent, Dr. C. C. Burlingame, Chairman of the Committee on Public Education of The American Psychiatric Association, submitted the following brief comments:

"During my two recent trips abroad, on which I had the honor to represent the American Psychiatric Association, I was rudely awakened to the fact that back here at home we have been failing to recognize Europe's basic needs in science and medicine.

"Naturally American medicine is most anxious to benefit again from the glory and productiveness that belonged to European science before the war. Wartime barriers were no sooner down than we dispatched emissaries to consult with European men of medicine about scientific progress in these past

years. We hastened to welcome foreign scientists back to our laboratories and schools, and we are eagerly anticipating the day that our people may again go freely to Europe for study and training.

However, refreshing as these renewed contacts may be for the moment, a vigorous exchange of ideas is valuable and stimulating only to the extent that the ideas can be implemented. If they cannot be implemented, discouragement and a sense of failure, inadequacy, and helplessness can be expected to be the inevitable result.

A most depressing situation exists at the present time in the war-disrupted countries of Europe, where the facilities for the pursuit of science are in varying degrees of disorganization and devastation. In many quarters, basic equipment and supplies are desperately needed. Indeed, it is conceivable that continued difficulties in obtaining those commodities might result in a scientific neurosis of frustration!

I was tremendously impressed by the spirit of the men in Europe. They are a courageous group, putting up a brave front in an admirable struggle with what they have, but it is questionable how long their determination and hope can withstand the undeniable inadequacy of their tools. And the majority of them are tied to their own countries by family or national ties, to say nothing of government restrictions on travel and monetary exchange.

Science and the world cannot allow scientific genius to stagnate for lack of technical support. If we would do most to help restore the essence and structure of European medicine and research, we would apply ourselves diligently to their material needs.

POST-FELLOWSHIP GRANTS BY THE MARKLE FOUNDATION.—A new program of "post-fellowship" grants has been announced by the John and Mary R. Markle Foundation. These grants will offer an opportunity to start a career in academic medicine to young scientists with the necessary training to hold a regular faculty appointment and to conduct original research. The purpose of the program, according to John M. Russell, Executive Director of the Foundation, is to attract much-needed talent to academic medicine by giving promising young scientists academic security and financial assistance for a period up to 5 years. The program will be conducted in cooperation with accredited medical schools in the United States and Canada. Grants of \$25,000, payable to the cooperating school at the rate of \$5,000 annually for a 5-year period toward the sup-

port of each successful candidate or his research or both, will be available beginning with the academic year, 1948-49.

Candidates will be recommended by medical schools and will be limited to young men and women with a particularly strong interest in research and teaching in any of the clinical or preclinical sciences or in the sciences basic to medicine. The young scientists chosen will be known as "Scholars in Medical Science."

The Scholar program places the emphasis on the personal qualities and scientific and teaching abilities of the men and women chosen, rather than upon particular research projects or teaching fields in which they may be interested. Persons interested in being considered as candidates for these grants are referred to deans of accredited medical schools for further information.

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DR. DEARBORN BECOMES PROFESSOR EMERITUS.—Dr. Walter F. Dearborn was made Emeritus Professor of the Harvard School of Education as announced at last commencement. Primarily a teacher, he studied medicine as a liaison between the fields of psychology and psychiatry. When the Boston Psychopathic Hospital opened as a teaching center he took advantage of the friendship of Dr. Southard to bring his classes there to study behavior problems of children.

He also, for many years, took his classes for a course in the study of mental defect as it affects children in the classroom, to Dr. Fernald at the school in Waverley. He realized the need of teachers to have an insight into the emotional disturbances of children and how their conduct was conditioned by them. Dr. Fernald lent his enthusiasm to this work which was continued until temporarily interrupted by World War II.

Although retired as head of the department at Harvard, Dr. Dearborn has been active this summer in giving his course for students at the University of Michigan. We trust that he will continue his excellent work.

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ROESCHACH INSTITUTE, INC.—The research committee of the Rorschach Institute has organized a system for following current Rorschach research in the various applica-

tions of the method. A slate of correspondents will be published in the new "Rorschach Research Exchange and Journal of Projective Techniques." These correspondents will act as clearing agents for information on unpublished research and as critics for annual reviews of published work. They will be corresponding with workers known to be engaged in investigation in each of their particular fields. Notices about new projects or requests for information should be sent to the appropriate correspondent, or to one of the co-chairmen of the committee: Mrs. Pauline Vorhaus, 27 West 86th Street, New York, or Dr. Donald Ross, Verdun Protestant Hospital, Montreal. It is particularly requested that anyone engaged in a research project which is not known to the correspondents should drop a line stating the plans. This system has been organized through no wish to monopolize control over Rorschach research, but to make possible a continual current assessment of progress, and to direct new research into fruitful channels with the avoidance of duplication.

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NEW YORK SOCIETY FOR SPEECH AND VOICE THERAPY.—The first meeting of this newly founded society was held on October 8, 1947, in the Academy of Medicine, at which time the president, Dr. Emil Froeschels, lectured on the topic, "Should the Speech Therapist be a Voice Therapist and Vice Versa?". The Society will sponsor monthly lectures on subjects of scientific and practical interest in the field of speech and voice therapy. The lectures will be accompanied by actual demonstrations of clinical cases. Guests will be welcome at all lectures. General and supporting memberships are available; those interested should write to Dr. Froeschels, 133 E. 58th St., New York 22, N. Y. or to Dr. D. Weis, 10 W. 65th St., New York 28, N. Y., Chairman of membership.

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NEW APPOINTMENTS, U.S.P.H.S.—The following commissioned officers of the U.S. P.H.S. have been assigned as Consultants in Mental Health to the Public Health Service District offices: Surgeon Murray A. Diamond to District 1, New York, N. Y.; Surgeon Curtis G. Southard to District 2,

Richmond, Virginia; Surgeon Louis Jacobs to District 3, Chicago, Illinois; Medical Director Henry C. Schumacher to District 5, San Francisco, Calif.; and Medical Director William F. Ossenfort to District 9, Dallas, Texas.

The following have been newly appointed to the headquarter staff of the Mental Hygiene Division: Dr. Raymond V. Bowers, as social science research analyst; Dr. John C. Elberhard as training specialist in psychology; Miss Esther A. Garrison as training specialist in psychiatric nursing; and Miss Pearl Shalit as psychiatric nursing consultant.

**PENNSYLVANIA PSYCHIATRIC SOCIETY.**—At the ninth annual dinner meeting of the Pennsylvania Psychiatric Society, held at The University Club, in Pittsburgh, September 18, 1947, Nolan D. C. Lewis, M. D., director of the New York State Psychiatric Institute, of New York City spoke on "The Special Aims and Organization of a Psychiatric Research and Teaching Center."

The following officers were elected to serve for the year 1947-1948:

President: LeRoy M. A. Maeder, M.D., Philadelphia.

President-Elect: Thomas A. Rutherford, M.D., Waymart.

Secretary-Treasurer: Philip Q. Roche, M.D., Philadelphia.

Councillors for one year: Samuel B. Hadden, M.D., Philadelphia, Charles H. Henninger, M.D., Pittsburgh, Harold L. Mitchell, M.D., Pittsburgh, Howard K. Petry, M.D., Harrisburg.

Councillors for two years: Edward J. Carroll, Jr., M.D., Pittsburgh, Eugene L. Sielke, M.D., Philadelphia, Mesrop A. Tarumianz, M. D., Farnhurst.

Auditor for one year: Robert J. Phiher, M.D., Woodville.

Auditor for two years: Elmer V. Eyman, M.D., Philadelphia.

Auditor for three years: Morris W. Brody, M.D., Philadelphia.

**NATIONAL ADVISORY MENTAL HEALTH COUNCIL.**—Two new members have been appointed to the National Advisory Mental Health Council of the U.S.P.H.S. They are Dr. Alan Gregg, Director of Medical Sciences, Rockefeller Foundation, New York, and Dr. Karl M. Bowman, Langley Porter

Clinic, San Francisco. They are successors to Dr. Frank F. Tallman, Commissioner of Mental Hygiene, Department of Public Welfare, Columbus, Ohio, and Dr. George S. Stevenson, Medical Director, National Committee for Mental Hygiene, New York, whose terms have expired and who have now been appointed Consultants in Mental Health to the U.S.P.H.S.

**ARMY MEDICAL LIBRARY NEWS.**—Plans are being made for a new Army Medical Library Building. The Board to review all matters relating to planning and construction has been reconstituted, under the chairmanship of the Deputy Surgeon General.

A change in Army Regulations, dated 3 July 1947, provides that the Army Medical Library shall be headed by an officer of the Medical Corps in the status of commanding officer with the title of director.

The Acquisition, Catalog, and Index-Catalogue Divisions are now functioning in the space formerly occupied by the Army Medical Library Museum on the second floor. This brings the processing units of the Library together, in proximity to the Reference Division and the public catalogs, making closer coordination possible.

According to a recent estimate, the *Index-Catalogue* has to deal with literature printed in more than 60 foreign languages, some of it in nonroman characters such as Greek, Russian, Hebrew, Arabic, Hindu, Japanese, Siamese, Urdu, and Chinese. The Editor of the *Index-Catalogue* has decided to lift the "iron curtain" of Eastern European, Semitic, and Asiatic languages and to supply the full English or Western European translation on the card prepared for a title printed in one of the unfamiliar tongues.

**THE VIENNA MEDICAL SOCIETY.**—At its principal meeting, June 20, 1947, *Die Gesellschaft der Aerzte in Wien*, the oldest medical society in Austria, founded in 1837, elected Dr. James V. May, former president of the American Psychiatric Association, and Dr. Clarence B. Farrar to corresponding membership. Their names were placed in nomination by Dr. Erwin Stransky, professor of psychiatry in the University of Vienna.

## BOOK REVIEWS

JUVENILE DELINQUENCY. By *P. S. de Q. Cabot, Ph.D.* (New York: The H. W. Wilson Co., 1946.)

This is an annotated bibliography compiled by the author and includes a large number of titles all of which deal with the various aspects of juvenile delinquency. Each article or book has a brief review which can give the reader a brief orientation to the content of the article.

This book should prove very useful to those interested in juvenile delinquency, and it contains under one cover the brief reviews of a great deal of valuable literature.

FREDERICK H. ALLEN, M.D., *Director,*  
Philadelphia Child Guidance Clinic.

TUTORING AS THERAPY. By *Grace Arthur, Ph.D.* (New York: The Commonwealth Fund, 1946.)

This monograph describes the duties and functions of the psychologist, the tutor, and the parents in a program of individual teaching of a child who has specific needs. It will be useful to teachers and encouraging to psychologists who are interested in this special field.

Dr. Arthur presents many interesting case histories of children with problems in learning, and examples of tutors who succeeded and who failed. In fact, the well-documented cases form the basis of the author's discussions. "Remedial teaching" is more interesting, and is perhaps a better term, than "Tutoring as Therapy." The material is well prepared; the chapters are clearly and simply written.

The author's experience has been unusual, extending back beyond the days of the child guidance clinics; her opportunities and interests probably have been unique in contemporary clinical psychology. It is good that she has recorded these.

The word "therapy" has been overworked and exploited. *Therapy* is the treatment of disease. The reviewer has a greater respect for the meaning of words than many professional groups are now displaying. *Educating* means developing and cultivating, expanding and strengthening of mental faculties; *training* is forming by instruction, discipline, and drill, or establishing in a habit by teaching; *teaching* is showing, guiding, and directing, or making one to know how; *tutoring* means having guardianship, tutelage, or care of. None of these words have relation to therapy. One who educates, trains, teaches, or tutors should not labor under the illusion that one is treating disease, and it would be disastrous to children if they associated these words with the treatment of disease. Those who work in the fringe of medicine or of psychiatry often subconsciously try to glorify their own professional work by expanding or extending their nomen-

clature. In the end this may be injurious to their professions, as it has been with specialty of psychiatry when psychiatrists have attempted to incorporate the "fringe."

"Tutoring as Therapy" is an excellent work for teachers who are especially interested in children who are in need of more help than the school can give.

RILEY H. GUTHRIE, M.D.,  
Norwich State Hospital,  
Norwich, Conn.

LECTURES ON PSYCHOANALYTIC PSYCHIATRY. By *A. A. Brill, M.D.* (New York: Alfred A. Knopf, 1946.)

Dr. Brill, as is well known, is the pioneer in psychoanalysis in the United States, his studies in this field dating from 1907, in which year he joined Bleuler's staff in Zurich.

In 1924 he gave a course of lectures in psychoanalysis at the Pathological Institute of the New York State service. These lectures were repeated annually, later at the Psychiatric Institute and Hospital, Columbia Medical Center, as part of the graduate courses in neurology and psychiatry, the object being "to show how Freud's new concepts were developed from 1893 to 1939 and how they were successively applied to clinical psychiatry." These 10 lectures, in their final form, are presented in this book.

Commenting that American psychiatry, in its modern phase, had its beginning in the New York State Pathological Institute and its successor, the Psychiatric Institute, Dr. Brill reviews the significant phases of recent psychiatric history. He cites the pre-Kraepelinian picture, the contributions of Kraepelin, "the father of modern psychiatry," and especially the innovations of Meyer in directing the course of the American school. The author's account of conditions around the turn of the century and of institutional life and habits at that time is vivid and entertaining and serves to emphasize the revolutionary changes that have characterized the almost half century of psychiatric history that Dr. Brill has lived through.

One of the most interesting features of his book is the fact that it reflects throughout his own experience and his own thinking. He recounts his early training in New York, Paris, Zurich, and the circumstances that led to his taking up psychoanalysis as a career. Bleuler and Jung furnished the original impetus and after a year in Zurich he returned to New York; and that date (1907), as he justifiably records, marks "the beginning of psychoanalysis in the United States." A most effective feature of Brill's pioneer work was his translations of the works of Jung and Freud. To the translation of the books of the latter especially he tells us



that he devoted most of his leisure time for more than 10 years. Through the instrumentality of Dr. Brill, "The Basic Writings of Sigmund Freud" are now available to English readers in the Modern Library edition (1938).

In the lectures that form the subject of this review, both clinical and historical features are combined, and we find interesting comments on outstanding personalities of the modern period and their views and methods. For example, a discussion of the symptoms of hysteria gives both the picture according to Charcot and the Freudian interpretation. We are introduced also to Breuer, Bernheim, Stransky, Prince, Babinski, Kretschmer, and many others.

The lectures as printed obviously follow closely the form in which they were originally delivered. Their easy, almost conversational style, with humorous touches, makes the reading entertaining as well as informative. Within a little less than 300 pages the course of the psychoanalytic movement is outlined, together with its theory, principles, and practice, in all of which the author has played so conspicuous a part. It is well that these lectures have now been preserved in book form.

C. B. F.

THE EXAMINATION OF REFLEXES. By *Robert Wartenberg*. (Chicago: The Year Book Publishers, 1945.)

In this book Dr. Wartenberg has given a very clear and concise description of the chaotic state of ideas about reflexes and their terminology, and his attempt to clarify the situation and bring a more orderly conception of reflexes and their proper evaluation has been particularly successful. The enormous amount of work contained in the small volume is deserving of high praise, and the careful way in which he has succeeded in bringing a clear picture out of the bewildering amount of literature cannot be too highly commended. He has been particularly concerned with the confusion arising from describing reflexes by the name of the man who first described them and has demonstrated time and again that the man for whom a reflex was named was by no means the first one who had described it. His description of the paradoxical reflex is particularly illuminating, and his explanation of all reflexes on the basis of stretch reflex is put forth with great clarity. As Wartenberg says in his conclusion, time alone will determine whether his theories are correct. There are only a few typographical errors, such as the confusion of prone and supine, and the mention of acute supra nuclear lesions of the abdominal muscles. It is a book, however, that should be part of the armamentarium of students of neurology.

EDWIN G. ZABRISKIE, M.D.

O PSICODIAGNOSTICO DE RORSCHACH EM EPILEPTICOS. By *Walderedo Ismael de Oliveira*. (Rio de Janeiro: Companhia Editora Americana, 1945.)

This report is a welcome one, as a fresh Rorschach test investigation in that group of diseases that has been known to mankind since the beginning of history, and concerning which man's knowledge is still so unsatisfyingly small. In addition, it is welcome as coming from Latin America where the test has been seeing energetic use these past few years. The investigation not only adds suggestive data concerning the personalities of epileptics; it also fills in our knowledge concerning the operation of the test in diverse cultural areas.

The monograph opens with a general presentation of views concerning the structure of character by previous writers and follows with a chapter on the Rorschach test. This in turn is followed by a review of the rather scant literature on the test in epilepsy.

The author then reports his own investigation. The test was applied to 50 patients in the "Colônia Juliano Moreira" (Brazil): 27 women and 23 men. This chapter includes the full Rorschach test records of 2 of the patients in the study and the test summaries for all of them. The author thus gives us a sample of his material, which makes possible the judging of his method. One could wish for more than 2 full protocols; but even so, it is gratifying to have some sample. In all too many Rorschach test publications, this desideratum is notable by its absence.

The final chapter presents the results, entirely in statistics. These findings make interesting comparison with those of previous students of epilepsy by means of the Rorschach test: Rorschach himself, Guiridham, Stauder, Borges. Some of these differences raise suggestive questions as to the mental life of epileptics. Confirmation of previous findings concerning epileptics is reported in such important factors as the contaminated thinking and low level of good quality perception, among the more important. Of interest is the high quantity of sexual content.

There is no interpretation of individual records in terms of personality structure. The author does construct a diagnostic "formula" for the patients he studied, derived from the statistical findings. This reviewer can only see formulas for any human personality structure as still highly hazardous propositions. Perhaps, however, the author does not intend a "formula" in the strict sense. As a report of statistical trend in the Rorschach test, in epileptics, students of the disease and of the test will find the monograph a valuable one.

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Michael Reese Hospital,  
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# THE AMERICAN JOURNAL OF PSYCHIATRY

## THE CONCEPTS OF "MEANING" AND "CAUSE" IN PSYCHODYNAMICS<sup>1</sup>

JOHN C. WHITEHORN, BALTIMORE, MD.

There is much that is irrational in the behavior of neurotic and psychotic patients which had been considered in the descriptive age of psychiatry as psychologically nonunderstandable and therefore insignificant, except as evidence of disease. In large part the apparently irrational has been found intelligible and personally meaningful as *reaction pattern*, in the modern, biologically oriented frame of reference of personality functions, particularly through the aid of the facts brought to light by psychoanalytic study of the unconscious. One may say that conceptual means have been found to "unscrew the inscrutable." We appreciate now that even irrational symptoms have personal meanings (for the patient although he may not tell us or even know it, as well as to the psychiatrist). Yet these forms of behavior presumably also have causes; and meanings and causes are not the same.

Some psychiatrists profess a belief in absolute psychic determinism as a scientific dogma, but this is an affirmation of metapsychological faith, not a statement of fact. The hypothesis of psychogenesis is not the only reason for the close scrutiny of a patient's attitudes and the searching of issues at stake in his reaction to his situation. For the strategy of psychotherapy there is much practical value in recognizing the *meaning* of reactions, even though causal explanation be lacking. In modern psychodynamic psychiatry, as distinguished from the preceding stage of descriptive psychiatry, one of the main principles is to conduct an individualized study of each patient adequate to point up the main recurrent theme or issue of dissatisfaction and conflict, to assess the individual's currently unused potentialities for dealing with this issue and to evoke a well-founded and self-assured mode of resolving the issue more satisfactorily.

Some persons show perspicacity in discerning the themes or issues which make

understandable much psychopathology that is otherwise apparently irrational. Such perspicacity can be cultivated and made useful for psychotherapy. Much of one's supervisory assistance to trainees consists in helping them search and sift their facts and sharpen their observations about a patient to gain a well-justified formulation of the meaningfulness of a situation for a patient and the relevance of his reaction thereto. The catch-word "psychogenesis" has become something of an impediment in this task. The perception of an issue in a patient's life, which could clarify the meaningfulness of his reaction, is not infrequently misconstrued as if it were the discovery of *the cause* of the patient's illness. Some young doctors are made foolishly happy thereby, feeling that they have "explained the illness"; some others, more discerning, perceive that the explanation is not complete, and so, obsessed with the fancied necessity for getting a complete psychogenetic explanation as a preliminary to therapy, they frantically attack the patient again and again, picking him to shreds in the ingenious effort to ferret out the true "cause," while neglecting the large strategic possibilities of aid to the patient which might be rendered through the appreciation of "meanings" implied in current and past experience.

I wish to make clear that it is not my purpose in this discussion to deny the validity of the psychogenetic concept. I believe that, among the many facts whose combination determines the development of a neurotic or psychotic condition, psychological experiences are of critical importance.<sup>2</sup> One could even say, *in some instances*, that *single traumatic events* are of crucial importance, as in some of the combat neuroses. In general, however, we have probably all come to the realization that *clinical study seldom reveals a single crucial traumatic event as the specific cause of a neurosis*. Most commonly one finds anamnesticly, a wealth of symptomatic anecdotes, *expressive* of the pathological attitude, rather than *causative* of it.

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

It is also commonly true, in an intensively studied and treated case, that many small items come to light indicative of a general pressure of many psychogenetic influences which have combined in shaping one's neurotic attitudes. It is possible, thus, in a fair proportion of thoroughly studied cases, to construct a fairly plausible but rather complex etiological hypothesis for the individual case.

The plausible etiological hypothesis, finally elaborated, may, however, be of considerably less strategic importance in therapy than the mutual understanding, reached much earlier, by which physician and patient both come to understand the meaning of some of the patient's neurotic behavior in terms of emotional need, rather than in terms of historical cause and effect. To arrive at a mutual understanding of the theme of a repetitive pattern may provide at once an opportunity for a "corrective emotional experience" or an "attitudinal interaction," setting into motion powerful therapeutic impulses. Some physicians are disposed, however, by personality and by doctrine, to disregard such opportunities to deal with meaning, in an obsessive insistence upon a routine continuation of the search for *the cause*. In the long run, there is great scientific potentiality in this obsessive search for specific etiology. In individual instances, however, the particular patient does not always benefit. The patient may thereby suffer loss of time, loss of rapport, and loss of a helpful focus for his own efforts. It is important in treating the individual patient not to miss the opportunities for mutual understanding of a meaningful theme, out of a scientific zeal to get all the details pinned down rigidly for an etiological hypothesis. Particularly if the patient has schizoid tendencies, such obsessive insistence provides one of the quickest and surest ways of losing a therapeutic relationship.

Personal experiences color professional thinking. My own earlier psychotherapeutic experiments were with psychotic patients, who, in comparison with neurotic patients, usually require a more personal support and more mature appreciation from the therapist, as encouragement to their shattered egos. One has many opportunities to notice in the early phases of the psychotic

patient's progress toward recovery that the patient does begin by making tentative and hesitating steps of his own. Without some spontaneity, the therapist is stymied. How to elicit and encourage spontaneity in a constructive direction is the most difficult technical problem, and in this task the therapist's grasp of the potential meaningfulness of the life-situation and the meaningfulness of the patient's reaction does give opportunity for helpfulness at a time before one has been able to get from the patient sufficient evidence to form a valid etiological hypothesis. The following incident may serve as an example:

A manic patient, Robert S., 50 years old, a business executive, upon being addressed by a certain doctor as "Mr. S.," repeatedly requested that he be called just "Bob." When the doctor inquired into the reason for his request the patient replied, "You are my superior—you are No. 1." The doctor then questioningly repeated the word "superior," while raising an eyebrow at the same time. This resulted in an outburst of seemingly incoherent talk, which included the sentence, "Well, okay, you are not my superior, so you may call me 'Mr. S.'" This little episode helped the doctor considerably to understand the patient's need in his relationship with him, and with other people as well. He was a proud, prestige-oriented person who resented being dependent and attempted to minimize his dependence on the doctor by caricaturing it in a way which is so typical of the manic patient.

A discerning comparison of the patient's attitudes in the current situation, with his attitudes during his periods of better previous functioning, grows naturally out of this interest in issues and attitudes (that is to say, meanings), whereas a physician obsessed with a thirst for discovering "the cause," tends to neglect the therapeutically helpful review of the patient's best period, and to focus exclusively on the traumatic and the pathological.

These matters mark out, however, differences of emphasis rather than completely different principles in the psychotherapy of the psychoses and of the neuroses. In both there is great importance in timing the steps of therapy to fit the need and the mood of the patient at a given time. In psychother-

apeutic strategy, when one bears in mind the meaning or theme of the patient's pathological reaction, there are opportunities to evoke memories and attitudes constructively useful in relation to this meaning, but such strategic opportunities will be missed if the psychiatrist is continually obsessed with the necessity to pin down the cause as the preliminary to psychotherapy.

Experience in the psychotherapy of neurotic patients makes one very familiar with the patient who has cooperated nicely with a psychiatrist's efforts to explore early memories and emotional traumata, and who has arrived at a fairly neat psychogenetic formulation, but without benefit in the form of personality growth or even relief of symptoms. The intellectual insight, or pseudo-insight, of such patients is a dubious benefit. It is not infrequently a considerable handicap to more effective therapy. Such experiences demonstrate the fallacy of the glib phrase: "Find the psychogenetic cause and eliminate it." As Franz Alexander has expressed it, the essence of psychotherapy is the "corrective emotional experience." The therapist has a considerably greater chance of helping his patient to achieve a "corrective emotional experience" if he directs his attention to the indications of the "meanings" implied in the patient's experiences, current and past, rather than focussing merely on indications of potential "causes."

Since the psychoanalytic school of thought has particularly emphasized psychic determinism and the etiological focus of therapy, it would be only natural that one would expect to find among psychoanalysts more than among other psychiatrists those who are, in a doctrinaire way, obsessed with the necessity to discover the psychic etiology as preliminary to psychotherapy. It is my impression, however, that this doctrinaire attitude is more characteristic of the psychoanalyst of limited experience. There is still, however, a persisting attitude in psychoanalysis, carried over from the phase of overemphasis "on the intellectual understanding of the past that made psychoanalytic treatment almost synonymous with genetic research."<sup>2</sup>

<sup>2</sup> P. 20. Alexander, Franz, French, T. M., et al. *Psychoanalytic Therapy*, The Roland Press, New York, 1946.

For one, concerned as I am, for purposes of psychotherapeutic strategy, to place much emphasis upon the *meaningfulness* of neurotic or psychotic reactions, in terms of the themes or issues involved in those reactions, it would be somewhat ungracious to appear in any way to make unduly critical remarks about psychoanalysis, just because some analysts have given too exclusive an emphasis to doctrines of etiology. We owe to psychoanalysis, more than to any other method or school of psychiatric study, the appreciation of meaningful issues in neurotic reactions. Historically, this has also been accompanied by many valuable etiological studies. The principal purpose of my discussion today has been, not to deplore the interest in "cause," but rather to deplore, and to seek to correct, the haziness of thinking which tends to obscure the distinction between "meaning" and "cause," so important for psychotherapeutic strategy.

Etiological research must of course continue, and it has better prospects of success through the increasing understanding of the meaningfulness of symptoms. Meaning and cause are not mutually contradictory; but neither are they synonymous. The understanding and practice of psychotherapy will be improved by the more general recognition of this distinction.

At the present time there are two special reasons for emphasizing the therapeutic implications of the distinction between meaning and cause.

One reason lies in public misunderstanding. Many persons have gotten from the movies, novels, and Sunday papers a mistakenly simplified notion that psychiatric salvation lies wholly in recapturing some specific forgotten memory and thereby finding and removing "the cause" of emotional ill health. The simplicity of this concept and the implications of painless magical therapy give it a special appeal to neurotic patients; and a special investment of time, effort, and tactful education is now often required to circumvent this romantic expectation. The psychotherapist needs to keep in his own mind a fairly clear-cut distinction between cause and meaning in order to avoid the pitfalls set by the patient's misled expectations.

A clear distinction also helps to avoid aimless quibbling with the patient about this issue.

The other main reason for emphasizing at this time the distinction between "cause" and "meaning" of symptoms lies in the overcrowded condition in most of the good institutions training young psychiatrists. Increased numbers in training dilute the advisory supervision and favor a tendency toward didactic patterns. The bright young trainee discovers that, in seminar and staff conference, interest and approval are aroused by case presentations well padded with so-called "etiological" probings in the direction

of early memories and traumatic episodes. The techniques of personality dissection are easier and more spectacular than those of plastic reconstruction. If we fail to keep the young psychiatrist clearly oriented to current issues and attitudes in the patient's life, we are likely to develop a crop of probe-pushers, clever in case presentations but not very competent in actual management and therapy of real patients.

The present situation has seemed to me, therefore, to require some clarification of concepts along the lines of the distinction herein made between "meaning" and "cause."

## SOVIET PSYCHIATRY IN THE POST WAR PERIOD<sup>1</sup>

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Soviet psychiatry is passing through a significant period of its development. The end of the victorious war gives it an opportunity to resume peacetime progress. "The problem of science is to anticipate and to act," said Claude Bernard. It is a question of scientific foresight based on the laws governing the course of its development. With reference to psychiatry this means the necessity of analyzing everything pertaining to morbidity, in order that the essential measures may be taken for combating it and for strengthening the mental health of the population.

During the war in the U.S.S.R. there was no increase in the number of schizophrenic illnesses and of endogenous psychoses generally, but there were somewhat more reactive forms. One should consider, however, that the influence of unfavorable factors connected with the war will continue for some time after its cessation. Psychic trauma often leaves in the nervous system changes which maintain for a long time their morbid potentiality. While not at once giving rise to definite manifestations in the neuropsychic sphere, they may later lead to pathological phenomena, particularly if other etiological factors are added. The same is true of concussion.

But it is necessary to keep in view the fact that factors of war cannot be examined only in the sense of detrimental influences on neuropsychic health. In some cases one may speak of the attenuation and suppression of morbid manifestations, if only temporarily. The behavior of schizophrenics, for example, in many cases changed to better adjustment in the community and interest in work. The general drive for defense work may mobilize more healthy aspects in the psyche of the mentally ill, giving them a chance to partici-

pate in the group. With the end of the war and the cessation of the stimulating situation, the mobilizing influence is falling off and what was suppressed is brought to light again, sometimes with greater force than previously.

Past experience indicates that, after great wars, as a rule there has been an increase in the number of nervous and mental disorders. The cause of this has consisted in a deterioration of physical health and reduced resistance to external noxae; a great rôle is also played by the spread of infectious diseases, which in the past was a rule in war and in the postwar period. Factors of a psychological order are of exceptional importance. The increase in morbidity in the period 1914 to 1918 depended on all these factors, especially on the unpopularity of the war, the consciousness of the masses of its uselessness. In the recent war an increase in psychic morbidity did not take place; but this fact does not give Soviet doctors the right to self-complacency in the assurance that it will be so in the future, even if no measures are taken at all. Four years of strenuous work under difficult conditions with nervous strain and psychic trauma could not pass without a trace. If no increase in psychoses occurred, this does not exclude the possibility of changes in the neuropsychic sphere, not emerging in the form of definite illnesses but presenting signs of certain disorders in the organism susceptible of becoming definite illness under unfavorable conditions. In this sense one must be very careful of signs indicating even small changes in morbidity. The experience of past wars compels one to keep neurotic conditions in view particularly; analysis of available data reveals much of interest along other lines.

The Psychiatric Institute of the Academy of Medicine has analyzed data from Moscow psychiatric hospitals and clinics for a period of almost 20 years. As regards neuroses and reactive conditions, percentages beginning with the year 1931 continued on an approximately even level: 16, 15, 15, 14, 16, 17, 18.

<sup>1</sup> A brief abstract of this paper was printed in the *American Review of Soviet Medicine*, Feb. 1947. The Editor, Dr. Jacob Heiman, kindly supplied the full Russian text and authorized its use.

The translation was made in the Science Library of the Institute of Living, Hartford, Conn., through the kindness of the director, Dr. C. C. Burlingame, and is presented herewith.—Ed.

In the year 1941 a significant decrease is noted—13.5%, undoubtedly owing to the suppression of morbid phenomena and diversion of attention to war events. Some increase was observed in 1944.

The writer put forward the idea of the nervous demobilization syndrome, the severe picture of nervousness showing itself not immediately, under the influence of traumatic psychological factors, but later, when there is a change for the better and the situation does not require the former strain. Such pictures could be observed during the war, but more often they should occur after it as late nervous reactions.

This does not mean, however, that one should be mindful only of the increase in nervous reactions and psychogenic reactions in the strict sense, for analysis of the dynamics of morbidity in time of war shows that the change is noticeable in other groups as well.

There are very interesting data referring to general paralysis and cerebral syphilis. It is not surprising that a gradual decline has occurred in primary consultations for general paralysis until recently. Figures with regard to cerebral syphilis continue at the same level except for a slight increase in the last years of the war. Wartime conditions were rather unfavorable for treatment and of course more attention should be paid to this now. With regard to citizens in places formerly under German occupation, their greater chance of infection with this illness must be kept in mind.

If one is mindful of the dynamics of those morbid processes which require more ambulatory than hospital care, one must pay more attention to the wartime increase in vascular diseases, arteriosclerosis, and hypertension. This is observed both in hospitals and clinics. Comparative statistics by year are convincing in this respect. The increased morbidity due to sclerosis of the cerebral blood vessels is sharply distinguished against the background of increase in organic forms. First of all one is impressed by the almost complete parallelism of the curves, reflecting the dynamics of cerebral arteriosclerosis and organic diseases. As concerns the first, the figure holds approximately at the same level, between 3% and 4%, in the interval 1930-

1940. A significant rise is observed only with the year 1942. A still more significant increase is shown in statistics from hospitals—2.6% in 1937, 5.6% in 1944. Hospitals, of course, deal with the more severe cases, whereas clinics reflect the milder morbidity.

For examining more thoroughly the question of the dynamics and causes of the increase in illnesses, it was considered interesting to ascertain the corresponding data in general hospitals. In every psychosis, endogenous included, much of the morbid phenomena has a somatic root. Study of the somatic illnesses from the point of view of psychic reactions may assist in determining the structure of psychoses and in distinguishing somatic components in the complicated picture. On the other hand, if the study of lighter forms of the same illnesses in clinics, as compared with hospital cases, promises greater success for determining the pathogenesis, this is still more true as regards patients in the same groups in general hospitals. Here the connection of illnesses with general conditions as a whole, and the dependence of psychic changes on the somatic, may be established even more exactly. Data from general hospitals make it possible to demonstrate interesting dynamics, correlating in many respects with data of separate groups of patients in psychiatric institutions. And here particularly one observed a significant increase in cardiovascular disorders, generally arteriosclerosis and cardiosclerosis. At the same time it is hardly conceivable that it is a question of new diseases; under the influence of nervous, somatic, and neurovegetative strain, deficiencies become apparent which were formerly well compensated and which may be compensated even now.

Common to war dynamics and to illnesses of both the somatic and psychiatric series are changes in the vegetative nervous system in the direction of greater excitability. In work with neurotic conditions we always kept in mind the fact that under normal conditions, in a stable, purposeful individual psychiatrically speaking, the reaction to psychic trauma manifests itself, not in depression, tears, and behavior characteristic of the hysterical attack, but chiefly in the somatic and neurovegetative domain. Not infrequently

there arise in those conditions disorders which are apparently somatic but depend on disturbances of neurovegetative regulation rather than on visceral changes.

One may maintain that psychic morbidity is a derivative of general morbidity both in the sense of degree of diffusion and of clinical characteristics.

On good grounds one may say that the more or less express weakening of somatic health, the disorder of vegetative balance weakening neuropsychic stability and facilitating the development of disorders in the neuropsychic sphere, were a general phenomenon and should be considered as the direct consequence of the war and as affording an indication of the orientation which medico-prophylactic work should follow.

The future belongs to children, adolescents, and the young generation in general, a fact which is taken into account by the welfare organizations, the more so because of certain disquieting signs in their health which require particular consideration. These signs bespeak the necessity of centering attention on children, adolescents, and particularly workers in industry. Naturally university students should not be forgotten. Thanks to the enthusiasm characteristic of youth they overcame the greatest of difficulties without any disruption of their neuropsychic stability. But some traces of the shocks they endured remain, which might under unfavorable circumstances produce morbid changes. The Soviet Health Department plans measures also lest young people pay in the future for the fact that due regard was not shown for their somatic health at the proper time and that favorable conditions were not created for their life and work. Psychiatrists must point out that, in both medical and social organizations, special consideration should be given all adolescents and young people, both male and female, who formerly took part in the great war.

If one has the age index in mind, one should contemplate another aspect which for various reasons demands consideration in planning medico-prophylactic work. We have in mind people 45-55 years old. At this age a man has come to acquire great experience, knowledge, and occupational skill in one calling or another. In the masses, he

is not only a qualified worker in such and such a branch but also head of a larger or smaller group. With his help, chiefly, the training of new personnel from the young generation is achieved. In men at this time of life health is on the decline. Not without reason have the French created the term, "l'homme de la cinquantaine."

At this age there begins not only sclerosis of the cardiovascular system as the expression of definite aging, but also physiological changes with considerable increase of pathological processes. We spoke above about the increase in vascular disorders during the war, and this has particular reference to this age. In such cases, one must not lose sight of the fact that these are people who have experienced 2 or even 3 wars and have participated in the struggle against fascism, if not at the front, then in defense work at the rear.

A special postwar problem of great state importance is the problem of veterans of the great war. The achievements of Soviet psychiatrists in the field of traumatic psychoses have created a good theoretical basis for the resolution of practical questions of treatment. The investigations of Gurevich, Shmaryana, and Golant have contributed much toward greater knowledge of clinical aspects of traumatic psychoses, the differentiation of various forms, and the localization of the greatest damage in individual cases. Gilyarovski has paid great attention to the course and remote consequences of trauma. Rochlin and Sereiski have established new facts concerning traumatic epilepsy. The Psychiatric Institute of the Academy of Medicine, with Gilyarovski, Remezova, and Lukomski, have devoted attention to the psychic reactions in surgical and wounded patients and have shown that an inventory of the psychic aspect is of utmost significance for the treatment of the basic illness. Soviet investigators, both those belonging to the Psychiatric Institute of the Academy of Medicine and others—Zalkind, Goldovskaya—are compiling a new chapter in the psychiatry of the neuropsychic changes in long-standing extracranial wounds and also in amputees. Psychiatrists have utilized physiological factors in reestablishing nervous functions in the treatment of the traumatic psychoses.



Soviet psychiatrists, however, do not think that all theoretical questions, clinical and pathogenetic, in this province are already solved. The postwar period provides the possibility of utilizing in full measure principles whose importance has been particularly put forward in recent times—notably the follow-up study. Study of the dynamics of traumatic psychosis, with regard particularly to the remote consequences, will occupy a prominent place in general psychiatric work of the postwar period.

A more accurate definition of traumatic encephalopathy, its delimitations and legal aspects, is among the questions requiring attention. The application of more delicate methods of investigation allows the discovery, sometimes, of mild changes which seem to be a consequence of skull trauma, but they remain purely local signs which do not give one the right to recognize a psychiatric condition, with all its practical inferences. Here we see the danger of generalizing the idea of illness. With the end of the war the question of exact diagnosis and evaluation has not lost its importance, even if one has in mind the physical examination of recruits for the army; but the question has acquired particular importance in the field of pre-employment medical examination. A noncritical attitude as to the importance of "microsymptoms" and their overestimation may lead even a legal psychiatrist into error.

Experience obtained during the war with the study of the sequelæ of head trauma should be used in relation to trauma in time of peace. Here one should have in view trauma in transportation and in industry. For various reasons adolescents are especially often involved, and in recent times it has been precisely they who have been implicated in industry.

On the prophylactic side, one should also direct attention to trauma in the large towns as the result of the unusual development of street traffic and different kinds of transportation. For evident reasons, children are particularly often the victims. The number of accidents increases together with the age of the children, in other words, with the increase in activities and mobility. Obviously, boys are most often exposed. In regard to

consequences of skull trauma in children, as compared with adults, there stands out most the feature of pathological personality development in the sense of excitability and egoism with manifestations of antisocial propensities.

Aiming at the liquidation of the consequences of war, psychiatrists are not overlooking two other groups of people. The first is that of demobilized veterans of the Red Army. If they are discharged formally as free from illness, this does not mean that they do not have health deficiencies, particularly when it is a question of older age groups, of people who have endured all the burdens of the war. In a certain portion of cases, although they do not have definite illness, they do have the seeds of it demanding treatment which could not be carried out at all completely before demobilization. In a group of cases it may be a question of pre-invalidism, of morbid phenomena bordering on genuine invalidism. The importance of carrying on sustained work in clinics for all veterans is unquestionable.

The other group, a very numerous one, requiring attention is that of women—mothers and housewives. They remained behind after mobilization of their husbands and sons; entirely alone they accomplished heroic work in caring for small children under difficult conditions of wartime and they have the right to attention to their neuropsychic health.

The direction in which psychiatric work should go in the postwar period may be considered essentially clear; but undoubtedly it should be centralized, offer internal unity, be guided by one and the same principle.

Psychiatry in its development has passed through several periods and each of them is characterized by some principle. There was the period of custodial psychiatry which preceded therapeutic psychiatry. A new stage showed the prophylactic orientation, occurring after World War I together with the October Revolution. Should it be confined to previous principles or does it need something new? In order rightly to answer this question one must bear in mind the epoch in which we live and the tasks that arise at the present time. The next period will be crowded with creative work on all

sides of life. Therefore restoration alone is insufficient therapy and something more is required. Physicians have created for themselves the notion of euthanasia, painless, "happy" death. Mankind was designed not to die a happy death, but to live happily. Life itself is a creation and happiness is the satisfaction derived from creation. Instead of euthanasia, therefore, one would do better to speak of eubiosis, happy life in creative activity, as the goal toward which to strive. This is in conformity with one of the points of the five-year plan of the Ministry of Health of the U.S.S.R.—an increase in the duration of life. If one ponders this carefully, it is plain that the entire program is for action. Apart from the above-enumerated measures for the improvement of sanitary conditions on a nation-wide scale, factors depending on people themselves do not have a small significance. By neglect of one's health, inability to organize one's life and work, one not infrequently shortens one's

own life, and the life of others as well, by unwillingness and incapacity to consider their interests.

Here again one should recall the rôle of psychic factors, the meaning of which was so vividly exposed in the experience of the great war. Ambroise Paré said that happy people are ill less and live longer. The gay temperament may be not only of a constitutional nature but also the result of a better somatic state, favorable conditions of life and work, and satisfaction in the latter. To the creation of such conditions for creative work, psychoprophylactic effort should also be aimed. One needs to understand the idea of creative work in its broadest possible significance. It embraces the work of school children, the work of university students, as well as work in industry and general participation in constructive work in one field or another. Before Soviet physicians stands the problem of elaborating a mental hygiene under new conditions.

## FIRST YEAR ANALYSIS OF VETERANS TREATED IN A MENTAL HYGIENE CLINIC OF THE VETERANS ADMINISTRATION<sup>1</sup>

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The Los Angeles Mental Hygiene Clinic of the Veterans Administration had its beginning on June 26, 1945, and is the first clinic of its kind in the Veterans Administration; others are now in operation in strategic centers with still more to follow. This is an outpatient clinic for treatment of the service connected emotional casualties of World War II. It has the responsibility for the entire outpatient neuropsychiatric service in the Los Angeles Regional Office. Its purposes are to provide early treatment, while there are elements of anxiety present and the symptoms are reversible, and before the anxiety becomes too well channelized into somatic symptoms with too much secondary gain and intractability, and when psychotherapy is likely to be most effective; to guide the severely mentally ill into suitable vocations and avocations; and to alleviate pressures from their environment and in this way prevent repetitive and prolonged hospitalization. In a long range program the impact of such clinics as this should be felt in combating neuropsychiatric illness and the promotion of mental health.

It is probable that the intake load will level off while the treatment load will continue to mount because of the time required even for a short term individual psychotherapy which is the predominant method of therapy. Group therapy, the various drug therapies and hypnosis are also used in an adjuvant capacity. The staff includes psychiatrists, psychologists and psychiatric social workers in the ratio of 1:1:2.

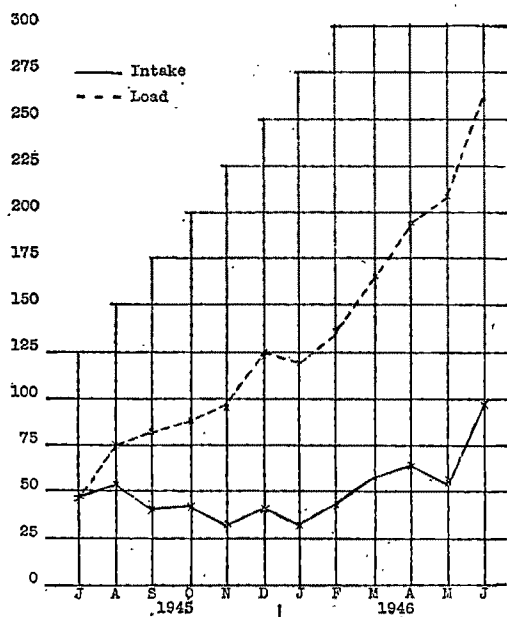
Since the beginning of the fall semester of 1945, the clinic has had in training psychiatric social workers from the University of Southern California, and from the spring semester of 1946, psychology students from

the University of California and the University of Southern California. Since the fall of 1946 the training program includes psychiatrists, psychologists and psychiatric social workers in conjunction with the local universities.

Referrals are made from the various Veterans Administration facilities, from community social agencies, veterans service organizations and educational institutions. The patient's first clinic contact is with the receptionist, who makes an appointment for him with the psychiatric social worker. The psychiatric social worker takes the initial interview to ascertain the patient's problem and to prepare him for treatment. The chief psychiatrist is responsible for assignment of all cases. Treatment staff conferences are held at regular intervals to point up our methods which vary with the patient.

Since the clinic opened, data have been accumulated on a sample of 493 cases. There is a sampling of 178 cases from June 26, 1945 through December 31, 1945 and a sampling of 315 cases from January 1, 1946 through June 30, 1946. From here on these samplings will be referred to as "full year," "first half" and "second half," respectively. A form was prepared and the data were taken at intake and at the closure of the case. These data represent various kinds of information such as age, marital status, etc., which is recorded in the claims folder containing the medical record of the patient, as well as his attitudes when he appears at the clinic. In some tables the total clinic group is shown and, in addition, a psychoneurotic group. This psychoneurotic group has been segregated on the basis of the army diagnosis of psychoneurosis at the time of discharge although we may have found it necessary in some cases to change the diagnosis. This segregation was made so that we might compare our data to comparable data of army discharges of enlisted men for psychoneuroses.

<sup>1</sup> Published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.



GRAPH A.—Intake and load. (From June 26, 1945, through June 30, 1946.)

charges to our clinic cases of psychoneuroses. This is particularly in evidence for the age group of 20 and under, as shown in Table 1. In comparable samples for the clinics and the army discharges for psychoneurosis, it is shown that we have only 26.9% of those 24 years of age and younger, while the Army discharged 40.5% in this age group. A part of this age shift into older groupings may be due to the length of time out of service, since 41.2% of the patients, as shown in Table 10, were out of the service a year or more before they sought treatment. It is interesting to observe that the largest percentage for psychoneurotic cases in the clinic is 33.5 for 25-29 age group while the largest percentage for the total clinic is 38.3 in the 20-24 age group. The table further indicates that the psychoneurotic is likely to come for treatment at a later age than those in *general* in other neuropsychiatric diagnostic categories.

TABLE 1

AGE DISTRIBUTION COMPARED WITH ARMY NP DISCHARGES AND TOTAL POPULATION

Age	Clinic		Army (a)	
	Total Percent	Psycho- neuroses * Percent	NP discharges Percent	Total population Percent
Under 20 years.....	1.1	0.7	7.9	11.5
20-24 years .....	38.3	26.2	32.6	41.9
25-29 years .....	25.7	33.5	25.7	25.5
30-34 years .....	19.1	25.5	20.6	13.5
35 years and over.....	15.8	14.1	13.2	7.6
	100.0	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

#### DATA

*Branch of Service.*—Cases have been accepted from four branches of the service—74.6% from the Army, 20.3% from the Navy, 3.9% from the Marine Corps, and 1.1% from the Coast Guard.

In comparison with the relative strength of the Army and Navy at the 1945 peak (1), these figures point to a proportionately larger number of veterans from the Army than from the Navy and may reflect the more careful selection of naval personnel.

*Age.*—For the most part there is a shifting to older age groups from the total army population to the army psychoneurotic dis-

*Sex.*—The ratio of 1 female to 9 or 10 males in the clinic is markedly out of proportion to the relatively smaller number of females in military service (1). Further, our data reveal that more than twice as many psychotic females as males came to the clinic for treatment.

*Marital Status.*—Table 2 shows a striking difference in the marital status of our psychoneurotic group and the army discharges for psychoneuroses. In our group 41.9% were married at the time they came to the clinic as compared with 31.2% of the comparable army group. Although the latter shows a slight tendency toward the broken home, our group shows a definite increase

of divorces and separations at the time of intake. Many of our cases come in with problems of marital discord as the precipitating cause for clinical services.

*Education.*—In Table 3, our cases definitely show a considerably higher educational level than do the army discharges for psychoneuroses. This might suggest drive or aspira-

low even after taking into consideration the large number of students and the fact that man power demands at these times have been for the most part on an increase. This definitely indicates the importance, from an economic point of view, that maladjusted veterans should receive treatment as soon as possible. Many of our patients do either

TABLE 2

MARITAL STATUS COMPARED WITH ARMY NP DISCHARGES AND  
TOTAL ARMY POPULATION

	Clinic		Army (2)	
	Total Percent	Psycho- neuroses * Percent	NP discharges Percent	Total population Percent
Single .....	50.4	47.3	63.4	59.9
Married .....	38.9	41.9	31.2	38.0
Divorced .....	7.5	9.5	2.5	1.4
Separated .....	2.8	1.3	0.5	0.5
Widowed .....	0.4	0.0	2.4	0.2
	100.0	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

TABLE 3

EDUCATION COMPARED WITH ARMY NP DISCHARGES AND TOTAL ARMY POPULATION  
(FULL YEAR)

	Clinic		Army (2)	
	Total Percent	Psycho- neuroses * Percent	NP discharges Percent	Total population Percent
Elementary school only (grades 1-8).....	10.2	11.8	43.4	30.9
High school .....	63.6	63.2	45.1	53.2
College (including postgraduate work of 1 year or more) .....	26.2	25.0	11.5	15.9
	100.0	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

tion both in the educational field and in seeking therapy. If primarily those with greater educational achievement seek therapy, it might be desirable to develop a program to reach the others with the lower level of intelligence or educational achievement, unless it is found that these latter may more readily fall into their prior way of life, which alleviates or does not further complicate their neuropsychiatric disability.

*Employment.*—On the whole, our cases shown in Table 4 represent poorer employment adjustment before induction into service than army psychoneurotic discharges. At the time that our patients appeared at the clinic the incidence of employment was

secure jobs or become students as they begin to taper off or terminate treatment.

*Source of Employment.*—As shown in Table 5, our patients appear to be a little less versatile in making contacts for employment than the army discharges for psychoneuroses. Fewer return to the old job and fewer got jobs on their own even after taking into consideration the larger percentage of students in our group. These facts may be due to the incapacitation of the emotional disturbance felt by the person himself and his inability to establish satisfactory personal relations.

*Medical Discharge.*—There is believed to be a trend among employers to place less

emphasis than formerly on the medical discharge for neuropsychiatric disability in employing veterans; yet 19.7% of our cases, as shown in Table 6, reported that the medi-

of the disability and its effect upon the personality may be a greater determinant for some veterans. However, we feel that in many cases, the satisfaction and security of

TABLE 4

COMPARISON OF PRE-INDUCTION EMPLOYMENT WITH PRESENT EMPLOYMENT  
FOR THE CLINIC AND FOR ARMY NP DISCHARGES  
(SECOND HALF)

Clinic	Employed	Unemployed	Students	Total
Total	Percent	Percent	Percent	Percent
Before induction .....	79.6	17.2	3.2	100.0
At present .....	33.4	41.3	25.3	100.0
Psychoneuroses *				
Before induction .....	85.9	12.6	1.5	100.0
At present .....	46.9	33.1	20.0	100.0
Army NP discharges (2)				
Before induction .....	93.7	3.8	2.5	100.0
At present .....	85.9	13.1	1.0	100.0

\* Army only, with commissioned officers excluded.

TABLE 5

SOURCE OF HELP IN FINDING EMPLOYMENT (SECOND HALF)

Source of help	Clinic		Army (2)
	Total	Psycho-neuroses *	NP discharges
	Percent	Percent	Percent
Returned to old job.....	14.2	23.0	33.0
Secured new job			
No help .....	13.9	14.6	41.6
USES .....	3.5	3.1	8.6
Veterans Administration .....	0.0	0.0	.6
Selective Service .....	0.0	0.0	.7
American Red Cross.....	0.0	0.0	.6
Friends or relatives.....	5.0	3.8	6.1
Others .....	3.0	3.8	1.8
Unemployed .....	36.5	30.1	7.0
(Students) .....	23.9	21.6	
	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

TABLE 6

THE RELATION OF MEDICAL DISCHARGE TO EMPLOYMENT JOB OPPORTUNITY  
(SECOND HALF)

	Psycho-neuroses *	Others	Total
	Percent	Percent	Percent
Medical discharge reported to eliminate job opportunity....	13.8	50.0	19.7

\* Army only, excluding commissioned officers.

cal discharge prevented them from getting employment one or more times. In the further analysis of the data, it is suggested that there may be a more compelling factor than the medical discharge itself in certain cases as indicated by the drop to 13.8% for psychoneurotic cases and an increase to 50% in all other diagnostic categories. The severity

employment resulting from careful placement have an alleviating effect upon the emotional disturbance. The potentialities of each veteran should be matched with employment opportunities rather than placing emphasis on the medical discharge in referring and hiring.

*Health.*—Self-estimation of health prior

to service was considered good by 81.1% of the total cases and 78.1% of our army psychoneurotic group as compared with 48.4% of the army follow-up studies, as shown in Table 7. This is evidence for the great attribution of poor health to the service. Our statistics reflect the feelings of the patient before treatment. After they are in treatment for a short time, many are able to admit that their feelings of having poor health antedated service.

*NP Contacts.*—Of the clinic cases 9.3% reported receiving some amount of neuropsychiatric treatment prior to service. It is of interest to note that among these cases there was only one psychotic. The percentage is rather high and might raise the question of the desirability of screening at induction on the basis of this factor. Orientation to psychotherapy prior to service may make it easier for the patient to resume treatment at this time.

*Migration.*—The population shift to California is indicated by the facts that only

19.1% of the clinic cases were born in California and that 61.6% were inducted in California. A migratory tendency may be significant in some of these cases as a part of the neuropsychiatric pattern of maladjustment, as well as resulting from a general trend in shifting of population.

*Grade.*—In general, our clinic cases are likely to be of a higher military grade distribution than that of the Army and especially the army discharges for psychoneuroses. In our psychoneurotic group 21.3% are at the grade of private as compared with 70.2% of those in the follow-up group, leaving respectively 53.9% to 15.9% above the grades of private. In comparison, then, with the grades of the general psychoneurotic discharges there is a definite tendency of the higher grades to be more active in seeking clinical services. Among the commissioned officers the clinic statistics show 5.9% for the army and 1.0% for the navy.

*Foreign Service.*—Of the total clinic cases for the "second half," 67.6% had foreign service and 31.1% of cases with foreign service were in combat. This indicates a relatively high percent of NP disability for combatants when it is considered that there was more careful screening for combat personnel than for others.

*Length of Service.*—Table 9 for the first half shows that 70.0% of the clinic cases spent one or more years in the service with 25.6% serving from 2 to 3 years. We might consider the period of 3 to 9 months with 21.7% as being another critical period representing the threat of combat and danger. In a short war of one year approximately 70.0%

TABLE 7  
SELF-ESTIMATION OF HEALTH PRIOR TO SERVICE  
COMPARED WITH THE ARMY NP DISCHARGES  
(SECOND HALF)

Estimation	Clinic		Army (2)
	Total	Psychoneuroses *	NP discharges
	Percent	Percent	Percent
Good .....	81.1	78.1	48.4
Fair .....	16.1	21.9	42.8
Poor .....	2.8	0.0	8.8
	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

TABLE 8  
ARMY MILITARY GRADE COMPARED WITH THE ARMY NP DISCHARGES AND THE TOTAL  
ARMY POPULATION (FULL YEAR)

Grade	Clinic		Army (2)	
	Total	Psychoneuroses *	NP discharges	Total population
	Percent	Percent	Percent	Percent
Private (including Aviation Cadet) ..	34.1	21.3	70.2	40.2
Private, First Class .....	18.3	24.8	13.9	21.0
Corporal (including Technician, Fifth Class) .....	14.9	21.3	9.0	18.3
Sergeant (all grades) .....	26.8	32.5	6.9	20.5
Commissioned Officers .....	5.9	...	...	...
	100.0	100.0	100.0	100.0

\* Army only, excluding commissioned officers.

of our cases would make a passing adjustment to military life.

*Time Out of Service.*—Although the clinic had been in operation 6 months before these statistics were taken, and as is seen from the varied initial sources of referrals that the clinic is well known, only 12.2% sought

TABLE 9

## LENGTH OF SERVICE (FIRST HALF)

Time	Percent
Less than three months.....	3.3
Three to six months.....	10.0
Six to nine months.....	11.7
Nine months to one year.....	5.0
One to two years.....	19.5
Two to three years.....	25.6
Three to four years.....	15.5
Four years and over.....	9.4
	100.0

TABLE 10

## TIME OUT OF SERVICE (SECOND HALF)

Time	Percent
One month or less.....	1.3
One to two months.....	4.4
Two to three months.....	6.5
Three to six months.....	17.7
Six to twelve months.....	28.9
One to two years.....	23.2
Two years and over.....	18.0
	100.0

some kind of help leading to the clinic within the first 90 days out of service. This suggests an attempt on the part of the patient to regain equilibrium and a solution on his own before seeking treatment.

*Diagnostic Distribution.*—Table 11 shows that about 9.0% of these cases are psychotic and therefore are potential hospital cases; but the fact that they can be carried by an outpatient clinic reduces proportionately the need for hospitalization among the discharged neuropsychiatric cases. Over half of this group were discharged from military service with a diagnosis of psychoneurosis, but our further study indicated evidence of psychosis. There is a large percentage of our cases in which anxiety symptoms predominate and are the motivating factors in seeking psychotherapy (note: 131 anxiety states—56 anxiety hysteria).

*Closures.*—Table 12 shows the type of

closure of 64.9% of the treatment cases. As "recovered" connotes a character reformation and requires long term therapy, which is not considered the function of the clinic, this category is most likely to be small. The 2.3% of recovered cases would include manic-depressive, depressive phase, cases. The 34.8% "improved" cases indicates recoverability to the extent of a satisfactory social and economic adjustment. It is felt that the patient is as good as, or better than, when he entered military service. His conflicts are resolved to a large extent. The 22.7% cases receiving "maximum benefit" were those showing some forward movement

TABLE 12

## CLOSURES (SECOND HALF)

	Percent
Recovered .....	2.3
Improved .....	34.8
Maximal benefit .....	22.7
Unimproved .....	9.1
Failed to return.....	31.1
	100.0

during treatment, but because of well channeled defenses, could only go as far as their ego potentiality. This includes psychotics, psychopathic personalities and deep seated character neuroses. In the 9.1% "unimproved" cases, therapy was ineffective. The 31.1% cases that "failed to return" registered a desire for treatment and were placed in treatment status but failed to appear for psychotherapy at all or discontinued after treatment began. Although this group appears to be large, we have no figures for civilian mental hygiene clinics to compare it with, but it is our impression that they will be equally high.

*Status of Cases.*—Of the cases coming to the clinic 21.6% were placed in their diagnostic categories but did not receive treatment, for the following reasons: (a) ineligible for treatment, (b) not presently accepting treatment, (c) seeking other than clinical services, (d) recommended for hospitalization, (e) consultations rendered to other sections of the Veterans Administration, *e. g.*, vocational rehabilitation, (f) referrals from us to either community or other Veterans Administration resources. Of the



TABLE 11

## DIAGNOSTIC DISTRIBUTION

	First half	Second half	Total
Psychoneuroses			
Hysteria .....	1	1	2
Anxiety hysteria .....	33	23	56
Neurasthenia .....	7	7	14
Anxiety state .....	35	96	131
Hypochondriasis .....	8	9	17
Reactive depression .....	2	7	9
Mixed psychoneurosis .....	2	23	25
Conversion hysteria, anesthetic type.....	1	1	2
Conversion hysteria, paralytic type.....	1	2	3
Conversion hysteria, hyperkinetic type.....	5	11	16
Conversion hysteria, paresthetic type.....	2	0	2
Conversion hysteria, autonomic type.....	0	7	7
Conversion hysteria, amnesic type.....	3	0	3
Conversion hysteria, mixed hysterical psychoneurosis...	2	16	18
Psychasthenia, obsession .....	3	5	8
Psychasthenia, compulsive tics and spasms.....	3	7	10
Psychasthenia, phobia .....	1	2	3
Psychasthenia, mixed compulsive states.....	3	5	8
	112	222	334
Psychopathic Personality			
With pathological sexuality.....	4	8	12
With pathological emotionality.....	22	25	47
With asocial or amoral trends.....	5	0	5
Mixed type .....	0	1	1
	31	34	65
Primary Behavior Disorders			
Simple adult maladjustment.....	4	13	17
Diagnosis Undetermined .....	8	9	17
Psychoses			
Manic-depressive, manic type.....	1	2	3
Manic-depressive, depressive type.....	0	1	1
Manic-depressive, mixed type.....	2	0	2
Dementia præcox, simple type.....	4	11	15
Dementia præcox, hebephrenic type.....	1	2	3
Dementia præcox, catatonic type.....	0	2	2
Dementia præcox, mixed type.....	6	6	12
Involutional psychosis, paranoid type.....	1	0	1
Involutional psychosis, melancholia.....	0	1	1
Involutional psychosis, unspecified.....	0	1	1
Paranoid conditions .....	0	1	1
Post-traumatic cerebral syndrome.....	0	2	2
	15	29	44
Without Psychoses			
Epilepsy .....	3	5	8
Alcoholism .....	4	3	7
Drug addiction .....	1	0	1
	8	8	16
Final totals .....	178	315	493

78.4% treatment cases, 64.9% have been treated and closed and 35.1% are still in treatment status.

#### SUMMARY OF DATA

Data were accumulated for a sampling of 493 cases in the Los Angeles Mental Hygiene Clinic from June 26, 1945, through June 30, 1946. There were 178 cases from the period of June 26, 1945, through December 31, 1945 and 315 cases from January 1, 1946, through June 30, 1946. The data were tabulated and converted into percentages. Certain items were compared with the army population findings on the follow-up study of discharges for psychoneurosis. According to the time intervals during which the data were accumulated the treatment of our statistical data led to the following generalizations:

1. Our case load has increased steadily since the inception of the clinic and the intake has shown marked augmentation as we have had personnel and adequate facilities to handle the load.

2. The clinic serves veterans with neuropsychiatric disabilities who have served in the Army, Navy, Marine Corps, and Coast Guard.

3. Those veterans seeking therapy for neuropsychiatric disabilities are likely to fall in an older age grouping than those among the army psychoneurotic discharges in the general population.

4. The percentage of female cases is greater than the proportion of females to males in the armed services.

5. There are more married veterans and a greater number of divorces and separations among those seeking clinical help than among the army psychoneurotic discharges in the general population.

6. The educational level of our case is considerably higher than a representative sampling of the army psychoneurotic discharges in the general population and total normal army population.

7. The neuropsychiatric cases appearing for treatment show a poorer employment adjustment both prior to service and after discharge than the army psychoneurotic discharges in the general population.

8. Veterans who appear for psychotherapy are less likely to return to their old job, less likely to find employment on their own and more likely to be unemployed than army psychoneurotic discharges among the general population.

9. The medical discharge for a neuropsychiatric disability is still an obstacle for this group of veterans in securing employment.

10. The clinical cases reported that their health was better prior to service than veterans of the general psychoneurotic discharge population of the Army.

11. About 10% of the clinical cases received some kind of neuropsychiatric treatment service prior to entering the military forces.

12. There is a marked shift of population to Los Angeles and vicinity among veterans with neuropsychiatric disabilities both prior to service and after discharge.

13. The military grade of those seeking neuropsychiatric treatment is likely to be much higher than the general population of the army neuropsychiatric discharges and total population of the Army.

14. Approximately two-thirds of the veterans seeking neuropsychiatric facilities have had foreign service and nearly half of those who have had foreign service have been in combat.

15. Over two-thirds of the clinical cases have served in the armed forces one year or more.

16. Better than three-fourths of our clinical cases did not seek neuropsychiatric treatment until after they had been out of service for 3 months or more.

17. Treatment of neuropsychiatric disabled veterans on an outpatient basis reduces the number of hospitalizations and social and economic incapacities accompanying such disabilities.

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# PSYCHOSES ASSOCIATED WITH THE ADMINISTRATION OF ATABRINE

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## INTRODUCTION

The administration of atabrine to our troops serving in endemic malarial areas was carried out on a large scale during the recent war. This drug was administered in therapeutic dosages for the treatment of malaria and in suppressive dosages to prevent the occurrence of clinical malaria.

Gaskill and Fitzhugh<sup>2</sup> in 1945 reported 35 cases of toxic psychoses following the administration of atabrine in the treatment of malaria.

The author, during the period from June, 1944, to November, 1945, while serving in the India Burma Theatre, observed 43 cases of psychoses in which atabrine was felt to be of etiological importance.

## METHOD OF STUDY

The evaluation of a psychosis can only be accurately made after a thorough study of the individual. The study and observations made during the psychosis, the physical findings and laboratory data should be supplemented by data which will give further clues to the individual's basic personality and his adjustment to environment, both civilian and military.

In order to study thoroughly the reactions encountered, the cases were investigated in the following manner:

1. Complete neuropsychiatric history of the patient.
2. Detailed history from the unit referable to adjustment in the unit; ability to get along with other men; date atabrine suppressive therapy was started; onset of the psychosis—acute or gradual; conflicts, if any, just prior to onset of psychosis; the picture the patient showed prior to entrance to the hos-

pital; and all information referable to the patient as recorded in his service record and files.

3. Complete social history from the Zone of the Interior.

4. Detailed observations of the clinical course.

5. Blood atabrine studies.

6. Retesting in a number of cases.

7. Patch testing for possible sensitivity to atabrine.

8. Review of cases seen plus the acquiring of data not previously obtained in cases seen prior to the inauguration of the detailed study.

9. The division of cases into two groups; those who developed psychoses after the administration of massive atabrine therapy for malaria (2.8 grams of atabrine in 7 days) and those who developed reactions during the course of suppressive therapy (.1 gram daily).

## INCIDENCE OF PSYCHOSES AND PSYCHONEUROSES

The incidence of psychotic and psychoneurotic reactions will, of course, vary, dependent upon the stress and strain to which a given number of troops are subjected in an overseas assignment. From October, 1944, to the conclusion of the present study on the atabrine psychoses, the 234th General Hospital serviced a definite geographic area. As this hospital was the only one which had facilities for the treatment of psychotic patients, all psychotics were immediately evacuated to the hospital either by ambulance or plane. In addition, all psychoneuroses needing definite therapy were sent there for treatment. As a result it was possible to study all psychoses that occurred in the area over this ten months' period.

The author had been in the geographical area with the troops being studied for a period of 24 months, and therefore was qualified to evaluate factors which might cause a rise in the incidence of psychiatric

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<sup>2</sup> Gaskill, H. S., and Fitzhugh, T., Jr.; Toxic Psychoses Following Atabrine, Bull. of U. S. Army Medical Dept. No. 86, 63, 1945.

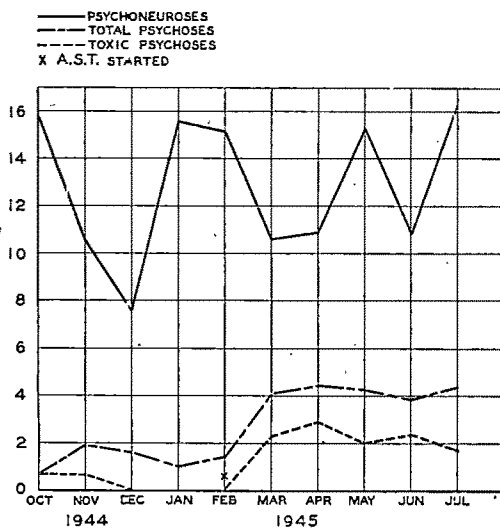
casualties. It may be stated that conditions that might have contributed to psychiatric breakdowns had improved rather than the contrary during this period. Living conditions, recreational facilities, post exchange supplies, better food and measures to counteract monotony and discontent had been instituted and had become increasingly better as time passed, and therefore should logically have helped the soldier to adjust more satisfactorily. In addition, the greatest percentage of troops had been in the area

During the period of this study the psychoneurotic admission rate failed to show significant change.

#### THE ATABRINE FACTOR

In the study of the early cases it was discovered that the greatest percentage of cases occurred in individuals who definitely gave histories which would predispose them to mental disease, either in the psychoneurotic or the psychotic group.

Because of this factor we postulated the "atabrine factor," dividing cases into two categories: (1) Primary group—those individuals who from all data obtained proved to be well balanced and who would fall in the normal group from a psychiatric standpoint. (2) Trigger group—those individuals, who from their histories might fall prey to mental disease if the proper "trigger" mechanism were introduced, the atabrine being not the primary factor but merely the trigger mechanism for the production of a psychotic reaction.



GRAPH I.—Psychoneuroses and psychoses. Rate per 1000 per year.

12 to 14 months, during which time it could be expected that the seriously maladjusted and the psychotics would have been weeded out.

On February 15, 1945, a new factor was introduced, namely, atabrine suppressive therapy, and 37,589 troops who had never previously taken the drug (except those treated for malaria) were placed on this suppressive schedule. From October 1, 1944, to March 1, 1945, the diagnosis of a psychosis was made in 21 patients, a monthly average of 4.2 patients per month. In March, 1945, 15 psychotics were admitted to the hospital, the increase in the admission rate being well stabilized through July, 1945, as is illustrated in Graph I. This rise, in view of improvement in the environment, was felt to be due to one factor—the institution of suppressive atabrine therapy.

Massive group	Suppressive group
Primary 3 Trigger 6	Primary 6 Trigger 28

When the basic personalities of the individuals in the trigger group were analyzed, they fell into the following categories:

	Massive group	Suppressive group
Cyclothymic .....	4	7
Schizoid .....	2	5
Emotionally unstable ....	0	12
Psychopathic .....	0	3

As the greatest percentage of the psychoses fell into the suppressive group it was decided to evaluate the reactions to determine if the time of occurrence of the psychosis differed in the primary and trigger groups. It was discovered that all the primary reactions in the suppressive group occurred after the individual had taken from 4.4 grams to 8.4 grams of atabrine, all reactions in this group occurring from the 44th to 84th day of administration of the drug, the average atabrine taken being 6.2 grams. This varied widely from the "trigger" reaction types, who became psychotic as early as the 17th day of suppressive therapy (1.7

grams of atabrine), and who also became psychotic as long as 5½ months after suppressive therapy had been started.

#### PSYCHOSES FOLLOWING MASSIVE ATABRINE THERAPY

During the period from June, 1944, to November, 1944, 9 cases of toxic psychoses were encountered. These patients had all received the massive treatment for malaria, 2.8 grams of atabrine, with the exception of 1 case in which the psychosis developed on the 6th day of treatment (this patient received 2.5 grams of atabrine). In this group 6 of the reactions were manic in type, while 3 were schizophrenic-like reactions. In 5 of the cases the malarial infection was of the benign tertian type, while in 4 the infection was of the malignant tertian or estivo-autumnal type. In all cases studied the reaction was acute in onset and characterized by sudden, explosive bizarre behavior, which required either immediate evacuation to the hospital or transfer to the neuropsychiatric service. The psychotic reactions occurred from the 6th to the 13th day of treatment, 7 of the 9 cases becoming psychotic 7 to 10 days after treatment had been started. The duration of the psychotic response varied from 12 to 30 days, the average duration being 21 days.

Of the 9 cases studied, 8 were returned to full duty, while 1, who had recurrent bouts of benign tertian malaria and who had given a history of a psychosis with a lobar pneumonia 10 years previously, was sent to the Zone of the Interior. One of the cases was returned to duty in another area and was placed on suppressive atabrine therapy. He was readmitted to another general hospital 6 weeks later, where the diagnosis of a toxic psychosis was also made, and he was returned to the Zone of the Interior.

#### PSYCHOSES ENCOUNTERED DURING ATABRINE SUPPRESSIVE THERAPY

The largest number of cases studied were those encountered in the course of atabrine suppressive therapy. These cases were seen from the period of March, 1945, through July, 1945, suppressive atabrine therapy,

.1 gram daily, having been started on, February 15, 1945.

Thirty-four cases were encountered in this group. In the series as a whole the number of grams of drug taken did not play a significant rôle except in the group which was considered to be the "primary" group.

Twenty-one manic-like reactions occurred in this group; as did one depressed reaction. Eleven schizophrenic-like reactions occurred; 4 of these showed predominantly paranoid features, 4 presented depressed catatonic features with catatonic excitement and pseudocatatonia, while the remaining 3 presented a confused hebephrenic picture with silly, bizarre behavior and vivid hallucinations, mostly in the auditory sphere.

Of the 34 cases studied, 30 returned to full duty, and 4 were returned to the Zone of the Interior.

#### CLINICAL PATTERN

When a study of the toxic psychoses is undertaken it is of importance to determine if possible a clinical pattern and course which will aid in differentiation from the constitutional psychoses.

The reactions in our cases fell into two general categories; a manic-like and a schizophrenic-like reaction. Twenty-seven of the cases demonstrated manic reactions. In all these cases the onset was sudden, acute and explosive, the patients being admitted either by litter under the influence of heavy sedation, or brought in by five or six fellow soldiers trying their utmost to control the patient. These individuals displayed marked hyperactivity, were constantly euphoric, were very fearful, were often combative and destructive, and displayed a marked flight of ideas. Delusions were common and hallucinations in both the visual and auditory spheres were present. Their hospital course was characterized by periods of the above mentioned behavior interspersed with periods of apparent lucidity during which the patient were pleasant, cooperative and seemingly normal. The maintenance of physical nutrition was not a problem in this group, as these individuals took huge quantities of nourishment at all times. During the period of agitation this group was exceedingly de

structive, tearing up pajamas, mattresses and even beds as they released their excess energies. In the suppressive group the reactions lasted from 25 to 30 days, the return to normal occurring in a period of 24 to 48 hours. In the group encountered with massive atabrine therapy the duration of the psychoses was shorter, "clearing" occurring in 14 to 21 days.

Fifteen cases demonstrated schizophrenic-like reactions that were classified in 3 large groups, the catatonic, paranoid and hebephrenic.

The catatonic group was made up of 6 cases. The onset in 2 of these was acute and explosive, with catatonic excitement present on admission to the hospital. This stage was characterized by stereotyped movements such as clapping the hands and saluting repeatedly, echolalia, repetition of Indian phrases with exclusion of the English language, delusions, auditory hallucinations, and extreme combativeness and destructiveness. The excitement lasted for 10 to 14 days, after which the individual became pseudocatatonic. In this period the patient often assumed catatonic postures, but in general was dull and listless, with a paucity and deliberateness of motor activities being a predominant part of the picture. One of the patients in this group was admitted in a catatonic stupor which persisted for 4 days, after which he became pseudocatatonic and then returned to normal. The remaining 2 patients in this group were admitted in a pseudocatatonic state, this state having gradually developed over a period of 48 hours. In these cases the return to normal was gradual and occurred in a period of 25 to 35 days.

In the paranoid group 5 cases were seen. In all of the cases the onset was acute and explosive, 3 being admitted in an acute combative state from their units. Two other cases had suddenly, on the morning of admission, developed delusions of persecution directed towards other members of the unit, while one was admitted with grandiose delusions as to wealth with a basic paranoid trend directed toward other members of the unit. Four of these patients, although markedly paranoid, were extremely euphoric at all times and were not problems in the ward. In these cases the paranoid trend gradually

receded in 3 to 4 weeks, and then suddenly disappeared. The fifth case in this series was extremely paranoid for 3 weeks; he was combative and fearful, neglected all personal hygiene, ate insects, attempted to eat feces, refused all nourishment both liquid and solid, and became suicidal, attempting to gouge out his eyes and kill himself by butting his head against the wall. This patient remained in this state for 3 weeks and then cleared spontaneously over night. When seen on the following morning he was oriented, cooperative and pleasant. Close questioning failed to reveal any paranoid trends. From this period, until discharge from the hospital one month later, this patient remained normal in every respect.

Four cases were seen in the hebephrenic-like group. The onset in these cases was also sudden, the patients usually being admitted because of bizarre behavior which had occurred prior to hospitalization. One of these individuals, a photographer in the Signal Corps attached to an Air Corps Base, on the morning of admission, stole a pilot's flying equipment, managed to get into a plane at his base and almost succeeded in an attempt to take off before he was forcibly removed from the plane. Another patient, a pilot in combat cargo, was found in the office of his commanding officer in a disheveled condition, minus his shirt, sitting in the chair of the commanding officer with his feet perched on the desk. When reprimanded by his commanding officer, the pilot with a foolish grin commented, "Oh, Major, don't get your bowels in an uproar." The behavior of these patients in the hospital was characterized by a total neglect of personal appearance, vivid hallucinations in the auditory and visual spheres, and silly, superficial behavior. As a group they gradually improved after 2 or 3 weeks and returned to normal at the end of this period.

After a number of cases had been observed it was decided to set a definite time limit as to the duration of the psychosis to serve as a guide in the differentiation from a constitutional psychosis. If the psychosis did not clear after a maximum period of 35 days it was classed as constitutional. Observations in future cases tended to substantiate this criterion for it was found that cases

eliminated by this method continued to remain psychotic for as long as 60 to 90 days, at which time they were evacuated to the Zone of the Interior.

In conclusion, the clinical picture was characterized by an acute, explosive onset in all cases except the pseudocatatonic group where psychoses developed gradually over a period of 1 to 2 days. The reactions as a whole were characterized by a stormy course which cleared suddenly in a period of 30 to 35 days.

#### PHYSICAL FINDINGS AND LABORATORY DATA

Physical examination on admission was negative in all cases. Three cases, all in the catatonic excitement group, developed high fever, rapid pulse and high blood pressure without pertinent physical findings about a week after hospitalization. All studies to determine etiology of the fever, including blood studies with repeated malaria smears, urine studies, agglutinations, stool cultures and spinal fluid studies, showed normal findings. These cases were given supportive treatment and heavy sedation, and made an uneventful recovery in a week to ten days.

Routine laboratory studies were performed in all cases and were universally negative except in one case who developed a hypochromic anemia. Blood Kahns were positive in two cases but spinal fluid findings were normal.

#### RETESTING

Retesting with atabrine was performed in 20 cases, 2 being retested while on duty under the supervision of their medical officers. Three of the cases in the massive group were in reality tested as well, for on follow-up it was discovered that 2 of these individuals had been on atabrine suppressive therapy for 5 months without any adverse effects. These 2 cases were in the *trigger* reaction group. The third case in the massive group, also retested by the advent of suppressive therapy, became psychotic after the administration of 4.2 grams of atabrine

and was readmitted to the hospital for treatment. This individual fell into the *trigger* group as well.

Retesting in the hospital was done in the following manner. When, in our opinion, the psychosis had subsided, the patient was moved to an open ward, where he became one of the group and partook in all activities, *i. e.*, group therapy, occupational therapy, ward duties, etc. At the end of 2 weeks he was given massive atabrine therapy in a disguised form. The patient was told that he was to receive capsules to help build up his strength. He was not restricted in his activities or given unusual care by the ward personnel. In several cases identical capsules containing sugar were given, after which the atabrine capsules were given. Needless to say, the sugar capsules did not reproduce a psychotic reaction.

On retesting in the hospital, all individuals being retested became psychotic with the exception of 2 who fell into the "trigger" group. The psychotic reactions produced were similar to the initial reactions in all cases, but the duration of the psychosis was, as a rule, shorter except in 2 cases. The 2 individuals retested on duty were retested by different methods. One patient who did not become psychotic when retested with massive therapy (2.8 grams of atabrine) was continued on suppressive therapy for 2 weeks. After this period he was sent to duty on suppressive therapy. At the end of one week he was readmitted in a psychotic state, after having taken a total of 4.9 grams of atabrine. This patient fell into the primary group, his initial psychosis occurring after the ingestion of 3.8 grams of the drug. The second case, also one of the primary group, was not placed on the massive régime, but took atabrine suppressive therapy for 18 days in the hospital. Suppressive therapy was continued while on duty, and he again returned psychotic 10 days later after having taken 2.8 grams of the drug.

Of the 20 cases retested, 15 were in the trigger group, while 5 were in the primary group. All cases in the primary group became psychotic on retesting, while 4 failures occurred in the trigger group. The results

of retesting can best be shown in the following table:

Five cases were evacuated to the Zone of the Interior as toxic psychoses, and a sixth

#### RESULTS OF RETESTING OF NINETEEN CASES OF ATABRINE PSYCHOSES

Reaction	Atabrine factor	Type of test	Where done	Result
Manic	Trigger	Suppressive	Duty	Negative
Pseudocatatonic	Trigger	Suppressive	Duty	Negative
Manic	Primary	Suppressive	Duty	Positive
Manic	Primary	Massive and suppressive	Duty	Positive
Manic	Primary	Massive	Hospital	Positive
Catatonic	Primary	Massive	Hospital	Positive
Manic	Primary	Massive	Hospital	Positive
Manic	Trigger	Massive	Hospital	Positive
Hebephrenic	Trigger	Massive	Hospital	Positive
Depressed	Trigger	Massive	Hospital	Positive
Hebephrenic	Trigger	Massive	Hospital	Positive
Manic	Trigger	Massive	Hospital	Positive
Manic	Trigger	Massive and suppressive	Hospital	Negative
Paranoid	Trigger	Suppressive	Duty	Positive
Depressed	Trigger	Massive	Hospital	Positive
pseudocatatonic				
Manic	Trigger	Massive and suppressive	Hospital	Negative
Manic	Trigger	Massive	Hospital	Positive
Manic	Trigger	Massive	Hospital	Positive
Paranoid	Trigger	Massive	Hospital	Positive
Manic	Trigger	Massive	Hospital	Positive

#### PRESENCE OR ABSENCE OF OTHER TOXIC SYMPTOMS

Gastrointestinal symptoms and skin lesions, often considered toxic manifestations secondary to the administration of atabrine, were not seen in our series prior to the onset of the psychoses. One case, however, had experienced mild anxiety, belligerence and arrogance for two months prior to the onset of his psychosis.

#### REVERSIBILITY OF THE PSYCHOSES

Although a series of only 43 cases has been studied it is the opinion of the author that the reaction is not a permanent one, and that the individual suffering from an "atabrine psychosis" does not suffer permanent damage, either functionally or organically, because of the psychosis. This observation has been well substantiated in the high percentage of patients returned to duty, especially in the group that was retested; for of 16 patients retested, who again became psychotic, only one was evacuated to the Zone of the Interior for further observation.

case, who had recovered from his psychosis, was later evacuated from another general hospital after he had developed a second psychotic reaction when placed on atabrine suppressive therapy.

Five cases were evacuated from our hospital; one individual had recurrent bouts of malaria with a previous history of a toxic psychosis; one, on retesting, developed a severe manic reaction; one, a pilot, was evacuated as his psychosis disqualified him from flying, and two others were evacuated because of the severity of their reactions.

#### SKIN TESTING

Patch tests to determine epidermal sensitivity to the drug were done in 15 cases with 15 controls obtained from the psychoneurotic group. Skin sensitivity was present in only one case, a control case. In view of the negative results obtained in this series, this test was discontinued.

#### BLOOD ATABRINE STUDIES

Blood atabrine studies, which were not available during the study of the psychoses



following massive atabrine therapy, were performed in 25 cases of the suppressive group. These studies were carried out through the courtesy of the Malaria Commission at the 20th General Hospital.

Levels were taken on admission to the hospital and when the patient recovered from his psychosis. Levels over 50 gammas per liter were found in a number of the cases with several going as high as 80 to 100 gammas per liter. However, others were found to be in the 30 to 40 gamma range which was considered as slightly above normal for the area.

An effort to correlate these levels with the psychosis was impossible as many individuals, non-psychotic, in a control group from the surgical wards of the hospital had equally as high a level as the psychotic group. The author also had the privilege of reviewing the reports of blood atabrine levels at the laboratory of the Malaria Commission where identical data were found.

The impossibility of using blood atabrine levels was further substantiated in one case that was retested. This soldier on retesting did not become psychotic after massive atabrine therapy and two weeks of suppressive treatment. He was returned to duty and prior to discharge a level was taken which proved to be 65 gammas per liter. Two weeks later he returned psychotic, at which time his atabrine level was only 50 gammas per liter.

#### ETIOLOGIC CONSIDERATIONS

In the series of 43 cases the reactions have been classified either as primary or trigger reactions. As 34 fell into the trigger group and only 9 fell into the primary group, it must be assumed that the etiological significance of atabrine varied in the two groups. As previously stated, all individuals in the primary group became psychotic between the 44th and 68th days of atabrine suppressive therapy, the average amount of atabrine taken being 6.2 grams of the drug. The 3 cases of primary reactions encountered in the massive atabrine group became psychotic after 2.8 grams of atabrine had been taken. However, in this group an infectious disease with high fever and systemic symptoms was a

definite factor which could lower the individual tolerance to the drug; this factor being absent in the suppressive group.

It is the opinion of the author that the individuals in the primary group were definitely sensitive to the drug, a fact which was further substantiated when retesting was done. Of the 5 primary cases retested, all became psychotic on retesting, while in the trigger group, in which 15 were retested, 4 failures resulted. What the nature of the sensitivity to the drug was, is impossible to determine. It must be assumed that the sensitivity in these individuals was of an "allergic" nature and that organic pathology does not result from the administration of the drug.

Information from units also helped in the determination of possible etiological relationship in the trigger group as many histories from the unit contained reports of emotional conflicts which had occurred prior to the individual's hospitalization. In order to evaluate this the unit's information was reviewed in the suppressive cases. In the primary cases, emotional conflict prior to hospitalization could not be ascertained. However, in the trigger group 24 of the 28 cases studied had a history of definite conflicts prior to hospitalization, while 2 cases had their onset during the course of an acute illness as stated below.

Conflict in unit.....	9
Familial difficulties (death and sickness in family, etc.) .....	2
Unfaithfulness of wife.....	2
Excessive drinking while on leave (admitted from rest camp).....	2
Fear of flying new route in new type of plane..	2
Conflict with tent mates over religion.....	1
Assuming added responsibility in unit.....	1
Sudden discontinuance of romance (by letter)..	2
Unsuccessful romance with Red Cross worker..	1
Onset during course of amoebic dysentery.....	1
Onset three days after recovering from acute illness .....	1

It is interesting to note that 2 cases of the trigger group who became psychotic after massive atabrine therapy have been on suppressive therapy for 5 months without the appearance of mental abnormalities.

When one has seen psychiatric casualties over a period of 22 months in a particular area where psychoses had been relatively

uncommon the following formula might be postulated:

(Predisposed personality)  
+ (emotional conflict) = (psychoneurosis).

However, when the atabrine factor is added the following formulæ can be postulated both in the primary and the trigger group:

*Primary*

(Stable personality) + (atabrine) + (individual sensitive to atabrine) = (psychosis).

*Trigger*

(Predisposed personality) +  $\left\{ \begin{array}{c} \text{emotional conflict} \\ \text{or} \\ \text{acute illness} \end{array} \right\} + (\text{atabrine}) = (\text{psychosis}).$

### TREATMENT

Treatment in the toxic psychoses falls into 3 broad categories: (a) maintenance of body nutrition, (b) adequate sedation, and (c) withdrawal of the toxic agent.

Nutrition was not a problem in the majority of the patients. However, in the paranoid and catatonic group many of the patients refused nourishment. In these patients both tube feedings and small doses of insulin to stimulate the appetite were necessary. The periods of excitement were treated by the frequent use of cold packs, showers, and the administration of sedatives, sodium amytal and paraldehyde being the drugs of choice. In some of the cases insulin was used as well.

### RESULTS

Forty-three cases of toxic psychoses associated with the administration of atabrine were studied over a period of 14 months. Of this group 37 (86 percent) were returned to full duty.

Individuals returned to duty were either placed on quinine suppressive therapy or transferred to an area where suppressive therapy was unnecessary. In addition, each individual was given a certificate which stated that he was sensitive to atabrine and was not to take the drug in the future.

It was possible to follow 30 of these individuals either as out-patients or by questionnaire for a period varying from 2 to 8 months. At the end of this period there had

not been a single readmission to a hospital for psychiatric treatment. However, 3 individuals complained of chronic headache and irritability, these symptoms not being incapacitating.

### SUMMARY AND CONCLUSIONS

1. Forty-three cases of psychosis associated with the administration of atabrine, 5

of them secondary to the massive treatment for malaria, and 34 following atabrine suppressive therapy, have been studied.

2. The reactions most frequently encountered were manic-like reactions, seen in 27 cases, while 15 schizophrenic-like reactions were seen. One depressive reaction was seen.

3. The reactions were characterized by an acute sudden explosive onset, a stormy course and a return to normal in a period of 30 to 35 days.

4. In an effort to determine the etiological relationship of atabrine in the study of the psychoses an atabrine factor was postulated, dividing the reactions into a primary and a trigger group. Thirty-four reactions occurred in the trigger group, whereas only 9 reactions occurred in the primary group.

5. It was found that the primary group displayed a true sensitivity to the drug, whereas in the trigger group a predisposed personality as well as emotional conflicts or acute illnesses were as great a factor as the atabrine itself.

6. Retesting with atabrine was performed in 20 cases; 13 being retested with the massive schedule, 4 being retested on the suppressive schedule, and 3 being retested by the massive schedule followed by suppressive schedule. Of the 5 cases in the primary group, which were retested, all became psychotic; 3 being retested by massive therapy, 1 by massive and suppressive, and 1 by suppressive therapy. Of the 14 cases in the trigger group there were 4 failures; 2 of

these received the suppressive régime while 2 received the massive plus the suppressive régime, the rest receiving the massive régime.

7. Blood atabrine studies were not found to be a reliable aid in the diagnosis of a toxic psychosis due to atabrine.

8. Treatment in the toxic psychoses consists of withdrawal of the toxic agent, the

maintenance of body nutrition and adequate sedation.

9. Of the 43 cases studied, 37 individuals (86 percent) were returned to duty,

10. Thirty of the 37 individuals returned to duty were given follow-up study for a period varying from 2 to 8 months. In this group there was not recurrence of the psychosis.

## LABORATORY FINDINGS IN AFFECTIVE AND SCHIZOPHRENIC PSYCHOSES

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### INTRODUCTION

Laboratory tests as aids in the diagnosis and prognosis of disease fall into two groups: those of a specific character relating to the presence of the etiological agent or to the failure of a certain organ; and those tests of a non-specific character which merely show the nature and extent of the disorder of bodily processes concomitant to disease.

Tests of the first type have their place well established in psychiatry in the diagnosis, for example, of paresis or bromide intoxication. However, little use is made of the other type test. Variations from normal in the results of common laboratory procedures done on patients with affective and schizophrenic psychoses must be expected for several reasons, among them the effect of emotion and mood upon the gastro-intestinal, circulatory and endocrine systems; changes in dietary habits; and changes in activity.

Since such variations are present they may be of some value. It is the purpose of this survey to review the variations in laboratory findings which might be useful in the following ways:

1. To follow the course of patients with these conditions who are under treatment and aid the therapist in observing the degree of return toward the normal state.
2. To aid the internist practicing in a mental hospital to sort out those findings occasioned by the psychoses studied from those of intercurrent disease.
3. To protect the patient with an early schizophrenic or affective psychosis who is taken to a general hospital or clinic from unnecessary diagnostic or therapeutic instrumentation, or delay in receiving psychiatric care, based on abnormal laboratory findings and misguided enthusiasm for finding

"something organic" to account for the symptoms.

It is not meant to suggest the substitution of a laboratory diagnosis for careful examination of the patient, nor to imply that reasonable studies to exclude other diseases should not be undertaken, but only that in both the psychiatric and the general hospital from time to time knowledge of these matters might prove useful.

In reviewing the literature on the common laboratory tests as applied to patients with schizophrenic and affective psychoses those determinations belonging exclusively to the field of psychiatry and neurology such as the electroencephalogram and the galvanic skin reflex are excluded, and no attempt is made to survey the abundant literature in which attempts are made to prove a specific endocrine or bacterial etiology for these conditions, since all these subjects are well reviewed elsewhere. Also avoided are procedures of an unusual, technically difficult or complex nature impractical for the purpose listed. Even with these limitations there are nearly 700 papers dealing with experimental work on this subject since 1920.

Changes in blood chemistry in schizophrenic and manic-depressive psychoses reported prior to 1938-39 were well reviewed by McFarland and Goldstein(1,2), and information concerning a number of laboratory tests in these illnesses is to be found in the books of Katzenelbogen(3) and Hoskins(4); but for the most part studies on the subject have been aimed at other goals than those listed here. Many reports deal with attempts to discover or prove an etiology, or point the way to a new therapy, or to establish or subdivide clinical entities, and neglect other possible applications.

Some of the reports are conflicting. The conflicts are due to a variety of causes, among which are failure to use adequate series of cases to prevent chance distribu-

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tions, failure to apply statistical methods, failure to use identical techniques, and the use of an arbitrary normal value which fails to take into account differences in reagents, techniques, and the age and sex distribution of the patients. In some cases disagreement seems to be the result of the use of different diagnostic criteria in selecting the experimental group; and frequently the exact classification, symptomatology and stage of the disease are not specified. In a few instances conclusions stated by authors are not the only ones which may be drawn from their data.

Some of the material reviewed is based upon laboratory studies of consecutive admissions to mental hospitals with little regard to diagnosis; in other instances material relevant to the affective and schizophrenic psychoses is presented with inadequate attention to subclassifications. Few authors studied made reference to those cases manifesting both schizophrenic and affective elements or to cases intermediate between those conditions and mental health; and it is in those two types of cases where laboratory findings might have greatest diagnostic value as well as service for the purposes listed here.

In the use and definition of diagnostic terms that of the authors cited is used as far as possible, but with some changes for purposes of uniformity.

Despite conflicts in results, differences in terminology, and other sources of confusion mentioned abnormal laboratory findings in some of the conditions studied are clearly established. In other instances, such as those in which little work has been reported, and those in which reported work neglects subclassification, the known facts can do no more than point the way for future research.

It will be apparent that with nearly 700 references available it is impossible to list and discuss the merits of each, assign priority, and tabulate evidence for and against certain conclusions. Instead, a majority opinion and a rough estimate of the frequency of certain findings based on an average or trend of several reports are presented. Where agreement is almost unanimous the matter is stated as a fact; otherwise the statement is qualified appropriately.

In presenting the results of this survey an attempt is made to give considerable detail on the more common and simpler procedures which might be useful for the purposes outlined, and to give passing mention to other available tests. A sufficient number of references is listed on each subject to provide a starting point for one interested in further investigation.

### BLOOD SUGAR

The fasting blood sugar of patients with affective and schizophrenic psychoses is usually within normal limits; however, glucose tolerance tests frequently show abnormalities. Though there are a few dissenting opinions it seems probable that half or more of schizophrenics, melancholics and depressives have an atypical glucose tolerance curve(5, 6, 7, 8, 9, 10, 11). For the iconoclast who believes all such cases must have a latent or subclinical diabetes, or for the psychiatrist interested in the psychosomatic aspects of diabetes this fact is subject to varying interpretations; but for the purposes listed here it appears most valuable. The chief problem seems to be in deciding what modification of the test to use and how to describe the abnormal findings.

The usual technique of administering orally to the fasting patient 50 gms. of glucose(7), or a similar dose based on body weight(5), and recording the blood sugar at half hour intervals for a period of two hours, should in the normal subject result in a maximum blood sugar of 160 milligrams percent, or less, and a return to the fasting level by the end of the two hour period(6). In these conditions the maximum is likely to be higher or the return to normal delayed, or both.

In addition to study of the maximum level of the blood sugar and the duration of its elevation, other means of evaluating the results obtained have been used. The area of the curve(10) determined by the formula  $A = (D \times M) / 2$  where D is the duration of elevation in hours and M is the maximum rise above the fasting level in units of 100 milligrams percent, should give a value for A of 0.20 to 0.40 in healthy people. The frequently used hyperglycemic

index (H.I.), determined by the following formula:

$$\text{H.I.} = \frac{100 (2 \text{ hr. blood sugar level—fasting level})}{(\text{maximum level—fasting level})}$$

gives normal values of 0 to 10(7, 10).

These formulae, useful as they are for statistical comparison, fail to disclose all possible abnormalities of the tolerance curve. If the curve is to be evaluated by inspection, and the relatively narrow limits for normal mentioned be accepted; then care must be taken not to overestimate the importance of minimal variations, since these occur in some normal subjects. One must also differentiate between the curves found in these conditions and those in diabetes, Graves' disease, and liver dysfunction. Changes in sugar metabolism during menstruation may also be confusing.

Modifications of the glucose tolerance test including the Exton-Rose technique(4), and the intravenous method(12), are probably equally useful, though there is disagreement in regard to the intravenous test(4). Apparently the abnormal glucose tolerance curves in patients with affective and schizophrenic psychoses are not the result of the nutritional state or the transitory emotional changes evoked by the procedure.

For confirmation, in addition to the modifications of the glucose tolerance test mentioned, other closely related procedures such as the galactose and levulose tolerance tests may be used. The galactose tolerance test (13) is an easy one to perform since it involves only administration of varying doses of galactose and testing the urine for sugar (Benedict's test) to determine the smallest dose causing sugar to appear. Normal men should tolerate 30 grams, while women before puberty tolerate 20 grams and after puberty 40 grams. Decreased tolerance to galactose has been reported in about half of schizophrenics.

In a healthy individual the administration of 50 grams of levulose should not result in over 20 percent increase in blood sugar and a secondary hypoglycemia should occur 30 to 90 minutes thereafter. Levulose tolerance is reported decreased in schizophrenia and manic-depressive psychoses and three types of abnormal curves have been described(14).

Of possible additional value in cases where the normality or abnormality of sugar

metabolism is in doubt are various tests of insulin tolerance(15), adrenalin tolerance (16, 17), and the reaction to ephedrine(18). Interesting, though impractical for the purposes outlined here, are animal experiments purporting to show an anti-insulin factor in the blood of schizophrenics(12), and a high insulin level in the blood of excited psychotics(19).

While investigation of sugar metabolism is being made caution must be observed that the patient does not receive barbiturates or other hypnotics(20).

#### BLOOD LIPIDS

Variation in blood cholesterol in normal people is rather marked, a normal range being from 110 to 195 milligrams percent, with an average of about 150(21, 22). Because of the variability and range of lipid values both in normal subjects and in these patients, tests based on them are less useful than those of glucose tolerance. It is generally agreed that cholesterol levels tend to be high and frequently are above normal limits in manic-depressives while values below normal limits are common in schizophrenics though hypercholesteremia is found in some cases (21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32).

Determinations of other lipid constituents of the blood show abnormalities paralleling the cholesterol changes (22, 23, 28, 30, 32). The rise in cholesterol following a high fat meal is said to be greater in manic depressives than in normal people(33).

In addition to quantitative determinations of cholesterol and other lipids the determination of iodine numbers has been suggested(31, 34), and the cholesterol-cholesterol ester and cholesterol-phospholipin ratios have been investigated(32).

#### NITROGENOUS CONSTITUENTS OF THE BLOOD

Abnormalities of nitrogenous constituents in the blood of patients with these conditions are not striking. A low fasting urea level has been reported in the melancholic group,

and glycine tolerance has been studied(35). In normal subjects the oral administration of 10 grams of glycine and comparison of fasting blood urea level with levels at five hourly intervals thereafter will show an increase of about 6.5 milligrams percent with return to fasting level by the end of the five hour period. An abnormal curve may consist of a more marked increase in blood urea (of about 14 milligrams percent), or a less marked elevation which continues throughout the five hour period. Such abnormalities are reported in melancholics and schizophrenics.

Other abnormalities reported include an increase in undetermined nitrogen(36) in depressives, melancholics and deteriorated schizophrenics; and an increase in creatine nitrogen(36) in simple and deteriorated schizophrenics and involutional melancholics.

A study of serum proteins(37) has shown the proportion of euglobulin to be low in schizophrenics.

#### INORGANIC CONSTITUENTS OF THE BLOOD

The normal serum calcium level is 9 to 11 milligrams percent. Though not all investigators agree it seems possible that an appreciable number of schizophrenics and manics have calcium levels above 11 milligrams percent and some have levels above 12 milligrams percent; there may be a tendency toward low levels in depressives (38, 39, 40, 41, 42, 43). A slight elevation of serum potassium may occasionally be found in schizophrenics(42); and an elevation of blood phosphorous may also be found(40).

Blood iodine is normally 1.5 to 4.0 gamma per cent; one investigator(44) reported over 36 percent of manics had blood iodine above 6.0 gamma percent, but 18 percent had less than 1.5; 36 percent of depressives were below 1.5.

Normal blood bromine is 0.8 to 1.0 milligrams percent; some investigators(45) have reported markedly reduced values in schizophrenics and manic-depressives.

Red cell chlorides have been reported to be high in schizophrenics(46).

#### THE FORMED ELEMENTS OF THE BLOOD

White blood counts over 10,000 may be found in about 25 to 50 percent of patients

with these conditions, and in some instances counts over 15,000 will be found in the absence of demonstrable infection(47, 48). Normal transitory emotional changes and activity have some effect on the white count in controls, but such factors do not altogether account for the findings in these patients.

Reports of variations in erythrocyte sedimentation rate are conflicting(49, 50, 51), but it seems probable that there is a tendency toward increased sedimentation rate in catatonic and hebephrenic schizophrenia, but not in the other mental diseases studied here.

Care must be taken in evaluation of increased leukocyte count and sedimentation rate to exclude infection.

Changes in erythrocyte fragility have been reported(52) with slight or moderate deviation in both directions being encountered, but the over-all tendency is said to be toward increased fragility in schizophrenics and manic-depressives. Prolonged coagulation time has been reported(53).

Reference is not made to red blood count and hemoglobin level since so many variable factors play a part in their establishment. Statistical studies of the frequency of certain blood types are of no direct clinical interest.

#### THE CIRCULATORY SYSTEM

Circulatory inadequacy in schizophrenia has been frequently hypothesized with comment being made upon the areas of cyanosis occasionally observed and the x-ray and autopsy findings of small hearts and diminished vascular bed in some patients; but for the purpose of this study tests of circulatory function offer little help.

The basal blood pressure in schizophrenia, systolic and diastolic, tends to be somewhat lower than in the general population. This is also true, but less markedly so, in the manic-depressive psychoses(54, 55). Since the average pressures in these conditions are only 5 to 15 millimeters of mercury below averages for normal groups, the extent of the normal range renders the blood pressure alone in a given case of little significance. One report states(56) that the ingestion of 200 grams of milk fails to alter the blood pressure in normal resting subjects but

causes it to be lowered in both manic-depressives and schizophrenics. It has also been reported(57) that adrenal cortical substance evokes a pressor response in a high percent of schizophrenics but in only a small percent of controls. The blood pressure changes evoked by different doses of adrenalin and ephedrine have been studied(58, 17, 59).

Findings concerned with circulation time (60, 61, 62), blood volume(63, 64, 65) and variations between oral and rectal temperatures(66, 67) are of doubtful value in the individual case due to marked overlapping of normal and abnormal ranges. However, the existence of essential oral hyperthermia (66) should be borne in mind.

Discussion of capillaroscopic research, measurements of the vascular bed of the retina, and other studies of the vascular tree are omitted as being beyond the scope of this survey.

#### SPINAL FLUID EXAMINATION

Abnormalities of the protein or cellular content of the spinal fluid, though they are found in 3 to 5 percent of consecutive admissions to mental hospitals without other cause, are much more often associated with neurological disorders which may have mental symptoms and so require further investigation(69, 70, 71).

The permeability quotient, or blood-cerebrospinal fluid barrier, has received considerable investigation. Bromide penetration (39, 72, 73, 74, 75, 76, 77, 78) is determined by giving the subject, by mouth, 0.01 grams sodium bromide, t.i.d., for five days; on the sixth day blood and spinal fluid samples are obtained simultaneously and the bromide level in each case is determined. The normal ratio is between 2.8 and 3.2; a ratio below 2.8 representing increased permeability, and above 3.2 decreased. There are some conflicting opinions but it seems that decreased permeability may be found in about half of schizophrenic subjects and increased permeability in perhaps a third of manic depressive patients. The test is not useful in the presence of chronic alcoholism(79) or infectious disease, either of which increases permeability.

Calcium penetration(39, 80) is studied by the simultaneous withdrawal and examina-

tion for calcium content of blood and spinal fluid samples; the normal ratio is between 1.8 and 2.2. This test yields the same general result as the bromide test; but abnormalities are not so frequent, nor do they always occur in the same cases as in the bromide test. If either test is to be used, then both should probably be done.

The degree of fall in spinal fluid pressure after the withdrawal of fluid, and the increase in pressure after histamine administration have also been studied(81).

There are a number of other tests which may be applied to spinal fluid which are supposed to be of some value in the diagnosis of these diseases, among which might be mentioned the Weltmann reaction, the Takata-Ara reaction, and the Leymann-Facijs test.

While a survey of bacteriological findings has not been a part of this paper, mention should be made of reports of finding by smear or culture the tubercle bacillus in the spinal fluid of schizophrenics(82).

#### URINARY FINDINGS

In various mental illnesses, especially schizophrenia, there is reported frequency of urination, increased urine output, and a tendency toward low urine urea concentration in twenty-four specimens; however, the results of concentration and dilution tests are normal(83, 84). A frequent acidotic character as demonstrated by the ratio of ammonia nitrogen to urea nitrogen has been reported(84), and in a few instances "unexplained" actonuria may be found(85).

Creatine, normally not present in the urine of men past puberty, but found normally in women and in children and adolescents of both sexes, is said to be present in the urine of male schizophrenics(86). Urinary creatine is also a finding in Grave's disease and in progressive muscular dystrophy. The test is not difficult.

Variations in the levels and ratios of organic and inorganic phosphates in the night urine of manic-depressives have been reported(87).

As in the case of spinal fluid examination there are reports in the literature of several tests of the urine supposed to be specific in various mental diseases. One rather simple



test which is worthy of mention is the Buscaino reaction(88). If to 3 cubic centimeters of urine 1.5 cubic centimeters of 5 per cent silver nitrate be added a white precipitate of silver chloride will form. If this is then heated and agitated for one-half minute no change should take place; but in an appreciable number of schizophrenics and manic-depressives, and in a much smaller number of normal subjects a series of color changes, ending with black, will be observed. The cause of this phenomenon is disputed.

Another frequently mentioned test, the Donaggio reaction(89) is said to be of some value as a guide to the condition and response of patients under shock therapy.

#### TESTS OF LIVER FUNCTION

Abnormal findings in various tests of liver function in schizophrenia have been studied; of these the hippuric acid test(90, 91, 92, 93, 94) and the cephalin flocculation test(95) appear most promising.

The cephalin flocculation test is reported to be positive in slightly less than half of catatonic schizophrenics, and in a higher than normal percent of non-catatonic schizophrenics, especially females.

The hippuric acid test is performed by the administration of 6 grams of sodium benzoate in one ounce of water and examining the urine for the total amount of hippuric acid excreted in four hourly specimens obtained thereafter. The lower limit of normal is 3 grams. Findings markedly below normal seem to be quite common in catatonics and less marked interference with the detoxication of sodium benzoate is to be found in other schizophrenics and in some depressives. There are some studies which are interpreted as failing to confirm the above, but even these show a tendency toward low values in the schizophrenic group.

#### OXYGEN CONSUMPTION AND METABOLISM

Achievement of a true basal state in psychotics is usually impossible, so that in regard to them, the term "basal metabolism" must be interpreted in the light of reality. If the findings of the basal metabolism test in these patients showed a high oxygen con-

sumption they could readily be dismissed as coincident to lack of cooperation. That is not the case. If we accept the normal range as  $-10$  to  $+10$ , then we find that half or more of schizophrenics and perhaps a fourth of manic-depressives have subnormal basal metabolic rates(96, 97, 98, 99).

Associated, but more complicated, or less commonly done procedures include the determination of lactic acid, which in schizophrenics(100) is reported to be higher than normal; the mean venous lactic acid for patients being 14.27 milligrams percent and for controls, 10.28 mgm. percent. Reduced and total glutathione are reported(101, 100) as lower in patients with these conditions; 60 percent having been said to show less reduced glutathione than the lower limit of normal. After exercise(102, 103, 32) schizophrenics produce more lactic acid than controls and have a lower blood pH.

Other findings include a tendency toward lower oxygen capacity(104, 105); reduction in hexose phosphates in schizophrenia(106), possible reduction of specific dynamic action of proteins(107), low choline esterase activity(108, 109) in schizophrenia; reduced respiration of certain bacteria in the presence of serum from schizophrenics(100); accelerated Kottman reaction in schizophrenics and delayed in manics(32). The techniques described for determining the sensitivity of the respiratory center to carbon dioxide are quite complicated but a simplified technique might be of some value(103, 110).

For these determinations, as in the case of glucose tolerance, sedation must be avoided.

#### MISCELLANEOUS DETERMINATIONS

Abnormalities have been reported in the refractive index and viscosity of serum and in the serum colloids,(32, 89, 111) the latter being studied by means of the ultra-microscope.

The Weltmann coagulation reaction(32, 89) applied to blood consists of adding the blood serum to varying concentrations of calcium chloride and boiling. Calcium chloride coagulates normal serum in dilutions as low as 0.05 percent to 0.04 percent. If dilutions of a greater degree (0.03 percent or less) produce coagulation, it is spoken of

as a shift to the right, and this is reported to occur frequently in schizophrenics and manics.

Hyperostosis frontalis interna(112), as shown by x-ray study, is reported to occur in about one-fourth of female patients (consecutive hospital admissions), and often is not accompanied by the other symptoms and findings of Morel's syndrome.

Studies of vitamin C deficiency and abnormalities in vitamin C tolerance have been made(113, 114, 115).

As was stated in the introduction no attempt has been made to survey completely the literature concerning endocrine imbalance in affective and schizophrenic psychoses at this time. However, mention will be made of a few tests. Menstrual irregularities, especially prolongation of the interval between menstrual periods, sometimes resulting in amenorrhea, are reported to be common in schizophrenics and manic-depressives, and vaginal smear technique in such cases shows, "a tendency to a delay, a weakened expression, or a temporary suppression of the follicular reaction"(116). The biological determination of estrin level by injection into castrate mice of a venous blood emulsion secured 1 to 5 days before menstruation is reported(117) to fail to show demonstrable estrin in more than half of schizophrenics but in less than 10 percent of normal women. Studies have also been made on male sex hormones(4, 118). The amount of cortical hormone, as determined by intraperitoneal injection of blood into adrenalectomized cats, is said to be high in manics(119).

A low amylolytic and high antitryptic titre has been reported in the serum of schizophrenics(120).

There is a phytotoxic property(121, 122) in the serum of depressives which may be demonstrated by its effect on the growth of *lupinus albus* seedlings.

Abnormalities have been reported in the gastric secretion of patients with these psychoses(123, 124).

#### SUMMARY AND CONCLUSIONS

1. Research appearing since 1920 on abnormalities in the results of common laboratory procedures applied to patients with

affective and schizophrenic psychoses has been reviewed with the assumption that such abnormalities are occasioned by a variety of factors including the effect of emotion and mood upon various body systems, changes in dietary habits, and changes in activity.

2. It is felt that such information will be helpful in following the course of therapy on patients with these conditions, will assist in differentiating findings due to these psychoses from those of intercurrent disease, and will prevent certain laboratory results from misleading physicians who encounter patients with undiagnosed, early, or borderline affective or schizophrenic psychoses in general hospitals, clinics and private practice.

3. Special attention has been given to abnormalities of the glucose tolerance curve, blood cholesterol level, serum calcium level, leukocyte count, permeability quotient, liver function tests, and basal metabolic rate in these psychoses. In addition, numerous other laboratory tests are discussed.

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## PSYCHIATRIC DIAGNOSES OF MILITARY OFFENDERS

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This paper consists of an outline and discussion of the psychiatric diagnoses of 361 military offenders. These men were studied at a military installation known as a disciplinary barracks of the medium security type. They were examined several months after World War II hostilities had ceased but many of them had been confined while the war was still in progress. Their offenses varied and these will not be discussed except to mention that they consisted of AWOL, desertion, theft, assault, insubordination, inciting riot, rape, and other offenses. AWOL was most common. This series of 361 cases does not comprise all of those seen. Contact had been established with well over 1000 offenders and many more than these 361 had been interviewed so that a diagnosis not encountered in this series may have been met before or after these inmates were seen.

This study is of diagnosis within the general framework outlined in a War Department Technical Bulletin.<sup>2</sup> In the Bulletin an attempt is made to introduce uniformity in nomenclature and a description of the diagnostic categories may be obtained by reference to it. Headings 1 through 5 in Table 1 are taken from the Bulletin. Headings 6 through 9 have been added because of difficulties encountered in classifying all of the offenders according to the nomenclature proposed.

Each diagnosis is based upon information gathered by social worker, psychologist and psychiatrist. The psychiatrist is the last to interview the man and he makes the final diagnosis. The case study consists of a social, educational and occupational history, a civilian criminal and military history, a history of previous military offenses, a story of the present offense and account of adjustment in confinement, a medical survey, psychological tests, and lastly a psychiatric in-

terview. The psychological tests consist routinely of an Army General Classification Test and occasionally of a Wechsler-Bellevue test, a Minnesota Multiphasic Personality Inventory, a Shipley-Hartford Retreat test, and an improvised sentence completion form.

Some of the offenders were initial cases and others had been interviewed and classified previously. The latter were interviewed at this time for purposes of reclassification. Very many of the previous diagnoses were psychopathic personality, constitutional psychopathic inferiority or constitutional psychopathic state. An impression was gathered that these terms were used exceedingly loosely and covered a multitude of diagnostic groups now listed under the character and behavior disorders in addition to some of the schizophrenias and mental defectives. Many of the cases previously referred to as types of "psychopaths" are included now under the headings of antisocial personality, asocial personality, sexual deviate, addiction and emotional instability reaction. The author believes that a tremendous improvement in nomenclature has been effected by the current classification, especially insofar as eliminating the loose use of the term psychopathic personality; but some question remains regarding the possible retention of the diagnosis for certain cases better understood through a more complete evaluation of the peculiarly defective super-ego structure. This point will not be elaborated here except to state that even so, the diagnosis would be applied to fewer cases than has been the case up to now.

The table requires some explanation. The heading, "character and behavior disorders," has 70 cases noted immediately after it. This indicates that the admixture of traits discovered were such as to make it too difficult to classify the cases under one of the subheadings or else, for other reasons, the subheadings did not seem sufficiently suitable. The total of 232 listed after this group indicates, of course, the 70 cases classified under the generic term plus the remainder scattered through the subheadings. It should be noted,

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<sup>2</sup> War Department Technical Bulletin (T B MED 203) Nomenclature and Method of Recording Diagnoses, 19 October 1945, War Department, Washington 25, D. C.

TABLE 1

## PSYCHIATRIC DIAGNOSES

1. Transient Personality Reactions to Acute or Special Stress:		
Combat Exhaustion .....	0	
Acute Situational Maladjustment.....	6	
		Total: 6
2. Psychoneurotic Disorders:		
Anxiety Reaction .....	6	
Dissociative Reaction .....	1	
Phobic Reaction .....	0	
Conversion Reaction .....	0	
Somatization Reactions .....	0	
Obsessive-Compulsive Reaction .....	0	
Hypochondriacal Reaction .....	0	
Neurotic Depressive Reaction.....	0	
		Total: 7
3. Character and Behavior Disorders.....	70	
Pathological Personality Types:		
Schizoid .....	9	
Paranoid .....	0	
Cyclothymic .....	1	
Inadequate .....	12	
Antisocial .....	42	
Asocial .....	8	
Sexual Deviate .....	5	
Addiction .....	29	
Immaturity Reactions .....	2	
Emotional Instability Reaction.....	5	
Passive-Dependency Reaction .....	23	
Passive-Aggressive Reaction .....	12	
Aggressive Reaction .....	14	
Immaturity with Symptomatic "Habit" Reaction .....	0	
		Total: 232
4. Disorders of Intelligence:		
Mental Deficiency:		
Mental Deficiency, primary.....	17	
Mental Deficiency, secondary.....	0	
Specific Learning Defects.....	0	
		Total: 17
5. Psychotic Disorders:		
Psychoses Without Known Organic Etiology .....	2	
Schizophrenic Disorders:		
Schizophrenic Reaction, latent.....	6	
Schizophrenic Reaction, simple type .....	2 (1?)	
Schizophrenic Reaction, hebephrenic type .....	0	
Schizophrenic Reaction, catatonic type .....	0	
Schizophrenic Reaction, paranoid type .....	3 (1?)	
Schizophrenic Reaction, unclassified .....	21 (7?)	
Paranoid Disorders:		
Paranoia .....	0	
Paranoid State .....	0	
Affective Disorders:		
Manic-Depressive Reaction .....	0	
Psychotic Depressive Reaction.....	0	
Involution Melancholia .....	0	
Psychoses With Demonstrable Etiology or Associated Structural Changes in the Brain, or Both .....	0	
		Total: 34
6. Diagnosis Deferred .....		Total: 46
7. No Diagnosis .....		Total: 5

TABLE 1—CONTINUED

8. Neurotic Traits .....	9	
Obsessive .....	1	Total: 10
9. Additional Personality Types:		
Hysterical Personality .....	1	
Compulsive Personality .....	2	
Pre-psychotic Personality .....	1	Total: 4
Total .....	361	

likewise, that 2 cases were classified under the general heading of "immaturity reactions" (this designation being in itself a subheading of character and behavior disorders) because they could not be placed under any of the immaturity reaction subheadings. The same explanation applies to the psychoses without known organic etiology.

Attention to heading number 6 ("diagnosis deferred") will show that eventual conclusions as to final diagnostic evaluations would tend to decrease this total and increase the total of some of the other diagnostic headings. Heading number 7 shows a small group with no psychiatric diagnosis. This might possibly be enlarged were some of the diagnosis deferred category to be added to it eventually.

Heading number 8 consists of "neurotic traits." This seemed necessary because the cases could not be classified elsewhere. Of these cases 1 happens to be listed separately under an obsessive category.

Under heading number 9 it seemed necessary to list cases with personality types not recorded elsewhere. These were not appended to the psychoneurotic disorders or character disorders in order to retain the original classification (War Department) intact.

There was some question about making a definite, final diagnosis in certain instances. This is indicated in the table where, under the schizophrenias, the number of cases under a subheading is followed by a number and question mark in parenthesis. Thus, it is equivalent to a "possible" diagnosis. The parenthetical addition is included in the number preceding it when computing the total under the generic heading.

Each case is listed only under one diagnosis and the diagnosis selected was, of

course, that into which the case seemed to fit most closely. This was done to avoid complications in computing totals but naturally it is very artificial. In fact, it accounts for some odd results. Thus, it will be noted that no cases are included under the "somatization reactions." Actually there were somatization reactions, mainly gastrointestinal, cardiovascular and genitourinary, but they did not constitute the main diagnosis. Although few cases are listed under the "psychoneurotic disorders" for the reason stated, such disorders were seen in other cases which do not happen to have fallen within this particular series. The "dissociative reaction" listed in the table was a case of somnambulism.

In some instances it was difficult to distinguish between the "antisocial" and "asocial" personalities because of overlapping but, again, they were classified as well as possible under the more appropriate heading. The "sexual deviates" consisted of overt and latent homosexuals with a case of pederasty.

The "addictions" pertain to alcohol. The offenders were listed under this heading when the alcoholism did not appear to be symptomatic of another disorder listed in this nomenclature. Thus, if a man were alcoholic but if the alcoholism were symptomatic of schizophrenia he was listed as a schizophrenic. Cases of symptomatic alcoholism were scattered through many of the diagnostic groups and alcoholism was quite common. There were instances of drug habituation but these usually fell under the antisocial and asocial personality groups.

Another point worth noting is that schizoid features were not infrequent in the offenders diagnosed as asocial and antisocial personalities. Since the latter designations seemed more appropriate they were recorded thus and the schizoid personality group



included only those offenders in whom the schizoid character structure was more pronounced. The author also would not be surprised if, in time, some of the asocial and antisocial personalities show more overt indications of schizophrenic disorders. If the group of schizophrenias in this series seems large it may be accounted for at least in part by the fact that overt delusions and hallucinations were not considered the only criteria for the diagnosis, provided that other indications of schizophrenic thought and affect disturbances were discernible.

The intelligence of many of the offenders appeared low both on psychological testing and in the clinical interview, but in tabulat-

ing diagnoses this was given secondary consideration if a personality disorder seemed of foremost importance.

This study of diagnoses cannot, of course, be absolutely fool-proof because of differences in available data and individual differences in examiners who might attempt such a study. It is meant to indicate a trend, however, and with these limitations in mind it is intended as a study in diagnoses within the general framework of the nomenclature outlined by the War Department. It may be of value in a comparative study of diagnoses of military offenders in other military installations and perhaps in civilian penal institutions.

# PROCEEDINGS OF SOCIETIES

## THE AMERICAN PSYCHIATRIC ASSOCIATION

### PROCEEDINGS OF ONE HUNDRED AND THIRD ANNUAL MEETING

#### HOTEL PENNSYLVANIA, NEW YORK CITY

MAY 19-23, 1947

#### MONDAY MORNING SESSION

MAY 19, 1947

The One Hundred and Third Annual Meeting of The American Psychiatric Association convened at 9.30 o'clock in the Grand Ballroom of the Hotel Pennsylvania, New York City, the President, Dr. Samuel W. Hamilton, of Washington, D. C., presiding.

CHAIRMAN HAMILTON.—The 103rd annual meeting of the American Psychiatric Association will come to order.

The first item on the program is the introduction of the President-Elect. If there is anyone here who by any chance is not acquainted with Dr. Winfred Overholser of Washington, D. C., please consider that he is now formally introduced to you and he will take the chair.

CHAIRMAN OVERHOLSER.—*President Hamilton, Fellow Members, and Fellows of the Association:* This premature introduction appears to me to be elicited now for one sole purpose, and that is, to introduce to you the maker of the Presidential Address, Dr. Samuel W. Hamilton. I have now been introduced. He will now speak.

Dr. Hamilton presented his Presidential Address. After he had concluded, the audience arose and applauded.

CHAIRMAN OVERHOLSER.—*Ladies and Gentlemen:* There is a tradition in the American Psychiatric Association that the Presidential Address is not open to discussion. I shall respect that tradition except for one or two sentences.

In the first place, Dr. Hamilton, I think, has rendered a distinct service in summarizing, in a time of flux when there is much dissatisfaction with things as they are and no hope for the better, what goes on in the Association and how the affairs are conducted. He has indicated that a good deal is done; that a good deal of change has taken place through the years; that the structure of the organization is such that it is amenable to adjustment, to the needs of further changes in the situation. He has done well to call our attention, too, to the background of the difficulties which beset the institutions, and indeed, the whole practice of psychiatry.

For all of this I am sure we are grateful and I wish, on behalf of the Association, to express what I am sure you feel: our gratitude to Dr. Hamilton for this valuable summary of the past and the vision of the future.

CHAIRMAN HAMILTON.—I thank you all.

We now have the pleasant privilege of listening to our colleague, Dr. G. Brock Chisholm. He is Executive Secretary of the Interim Commission of the World Health Organization, and he will talk to us about The Future of Psychiatry.

DR. CHISHOLM.—*Mr. President, Ladies, and Gentlemen:* May I thank you most sincerely for giving me an opportunity to speak to you. You will appreciate, of course, that what I have to say is from the point of view of international interest. But when I speak of the future of psychiatry, I speak about the organization of it in relation to the world as a whole and not to any one part of it. I would like that clearly understood because I may leave out of consideration many things that are of national importance.

Dr. Chisholm presented his address and when he had concluded the audience arose and applauded.

CHAIRMAN HAMILTON.—Dr. Chisholm needs no formal words from me of appreciation for what he has said to you. There will not be a general discussion of this paper. We might give the whole meeting of the Association with not four but six or eight or ten sessions to a discussion of various phases of it, and have a week filled.

We are fortunate at this session in having with us our colleague from England, Dr. John Rawlings Rees. He is going to speak to us more at length Wednesday evening, but since the program of next year's Congress is primary among the many responsibilities that he carries, he will speak to us for a few minutes now in elaborating some phases of what Dr. Chisholm has said.

DR. REES.—*Mr. President, Ladies, and Gentlemen:* I cannot tell you how much I welcome the opportunity of saying a word here, being first of all in this great country and then meeting this great Association.

Dr. Chisholm has certainly put fairly and squarely in our laps this problem of mental health for the future and I need advance no arguments as to the importance of what we have some little while been

trying to do. I do ask particularly today for your interest because, perhaps during the course of this conference and meeting, there may be an opportunity for you to give your criticism and your suggestions about this particular Congress.

There are on the reception desk the preliminary brochures which have just arrived, which will give you the outline of the Congress as proposed, and of the program. We do want, we depend, indeed we must have active cooperation from this group over here in the A.P.A. because without it we certainly could not make this International Congress mean very much.

The origin of the Congress really was this: That the European countries, the countries that had been occupied, were, of course, feeling desperately cut off from everything that was happening, desperately aware of the problems that Dr. Chisholm has just been talking about. They asked for congresses and meetings to be arranged in England, and so last year, discussing it with some of you over here, it was arranged that we should hold what would be the Third International Congress on Mental Hygiene and we should combine with it two other rather more technical conferences, that on Child Psychiatry, their second, and a Congress on Psychotherapy, which is another European association or federation. We have combined these, as you will see in the program, and I would hope to get your very frank criticisms. I hope you will shoot us down in ribbons, as they say in the Air Force, if you do not like it, and let us know about it so that we can return to England to the Program Committee to tell them about it.

We puzzled a great deal as to how to make an International Congress effective; how, when we will have Chinese, East Indians, Russians, British, Scotchmen and all sorts of people talking different languages or dialects, how we are going to make it succeed in a very short time. Can it be done by a whole lot of individual papers that everybody can listen to?

Well, we thought not. I don't know what you will think but we have been somewhat revolutionary and we have decided that through the whole of that Congress, both in the technical groups and in the more general group, no one is going to express an individual opinion in a paper; that everybody who reads a paper is going to be reading the result of group discussion beforehand, and we hope that every speaker on this topic of guilt, for example, which the psychotherapeutic group on the Continent have chosen, will insist that everybody will have discussed this with a large and diverse body of his colleagues, not only in psychiatry but in other disciplines as well, and that when he presents the opinions, they will be the opinions of group discussants. We can in that way afford to have fewer speakers and omit a good many things. We are trying to streamline the program as much as we possibly can.

The main conference of the Mental Hygiene group, the larger part of this whole Congress on Mental Health, we have called Mental Health and World Citizenship. We had, in fact, quite early the idea that we could do something to

support the remarkable charter of the World Health Organization and so we have chosen, as you will see in the program, as our five days of main topics the problem of world citizenship and good group relationships, the individual in society, family problems and psychological disturbances, planning for mental health, organization, training, propaganda and mental health in industry and industrial relations.

We want to get the whole work of this Congress done before the Congress ever happens, if possible because I think then we shall really do some further good work in the bars, if we can find them in London, which is where most of the work of the Congress takes place. The only way we can get this done is to get these subjects adequately discussed, and so we have set up preparatory commissions, separate groups for each of the topics of these five days, groups that we have designed for their basic structure to have a psychiatrist, a psychologist, a social scientist, an educational or business man or whatever it may be, an economist and an anthropologist. We have started these central groups in London and they have already begun studying all the material that might conceivably come under the heading of their particular topics.

We hope to have the other groups working in Scotland because we have chosen Londoners for these central groups. We hope to get them started in Canada and a great many in the United States. We are going to set them up in Switzerland and Holland and Scandinavia and further still afield, and we want these groups to meet and to let us know when they are meeting, when such groups are established, to keep in touch with the central group in London, who will then circularize repeatedly, constantly, all the other groups and tell them the sort of material that is coming in, the general trend of thought, the kind of books, the kind of papers that are worth reading. We want to hammer out these subjects and make sure they are presented to the larger world outside as the result of this Congress.

We have told the groups in London, the preparatory commissions, as we have called them, that we want, if possible, to arrive at some universally agreed matters which can be put in the form of resolutions to the World Health Organization at the end of that Congress in London.

And so what I want, and I know I don't ask this sort of thing in vain in this Association, is to see university groups, mental hygiene societies, and other groups of this sort being started right away. We do not have very long. If we can get enough mixed groups approaching it from every angle, working on each of these topics, then we shall indeed have done much of the work of the Congress beforehand and we ought to be able, when we get to London, to go a stage further in international relations.

We propose that those who have been working in groups in their own countries, when they get to London, shall begin to spend part of the mornings of the Congress in groups, but this time not with their own buddies. They should find themselves in groups of ten with representatives from

other countries and there will be the need to hammer out some of the international difficulties, differences of ideology, of terminology and so on, and get some real agreement. It will, we hope, be an experiment in international relationships in getting international agreement. We have a committee working on the structure and method of this Congress.

In addition to London, we also have a further group which is quite apart from the subjects that you will see suggested in the program. We have a group working on the dynamics of social change, hoping they will arrive at some practical conclusions and be able to tell us what we can do when they have reached these conclusions, how we can affect public opinion, how we can affect governmental opinion, how we can make something happen as the result of what we as a group feel might well be done.

So that is all I want to say to you today, ladies and gentlemen. I hope you will get these preliminary brochures which are outside. I hope that you will give it some time and thought. I hope that you will give me all sorts of suggestions, ideas and so on, while I am here. Dr. Fremont-Smith and I will collect and collate these various ideas and suggestions. Please do not feel that if you disapprove you should not tell us. Those are things I want to know and take back to England, criticisms and suggestions and the real impression of this, the largest group of psychiatrists in the world. Thank you so much.

CHAIRMAN HAMILTON.—We are happy to have this presentation of the big project that is ahead for next year at this time.

Will Dr. Parsons come forward and make a report for the Committee on Arrangements?

DR. PARSONS.—*Ladies and Gentlemen:* The Committee on Arrangements has been especially set up by the officers of this Association for your convenience and comfort and for the entertainment of your ladies. The Committee anticipates that most of the men members will find their entertainment between the covers of the program, and but little has been planned for them.

Members will be welcomed this evening, admission by badge let me say, between six and seven P.M. at a cocktail party. The hours will be strictly adhered to and, I repeat, admission will be by badge.

In the vicinity of New York, there is much of psychiatric interest. Institutions and clinics are open to you and you are especially invited to the Payne-Whitney Clinic at the foot of East 68th Street. For those who have a special interest in schooling and juvenile delinquency, I shall have occasion later to make a special announcement.

For us there is an interesting program. Having had nothing to do with it myself, I may be permitted to say it is the best ever. The Council has provided for the Women's Division of the Committee on Arrangements a special rendezvous, at which place the ladies will find gracious and good-looking hostesses to advise them how to spend the time pleasantly and profitably. To all

ladies and gentlemen, the Committee on Arrangements hopes that when the unhappy time for your departure comes, you will go away regretfully.

CHAIRMAN HAMILTON.—Thank you, Chairman Parsons.

Dr. Malamud, will you report for the Committee on Program?

DR. MALAMUD.—*Mr. President, Ladies, and Gentlemen,* the program as printed is, I hope, before you all, and there is very little that I have to add to it. There are a few changes that we felt had to be made after the program was set up and one of the most important ones is one that I want to mention right now.

This afternoon at two o'clock we had scheduled Section II, the program of Experimental Studies. We had to change that. You have a notice to that effect on the back of the first page and also at the beginning of this morning's program. Section II, therefore, instead of the Experimental Studies, will be a meeting of the Joint Session of the American Psychoanalytic and American Psychiatric Associations. That will be up in the Penn Top.

There are a few minor changes in regard to papers that had to be shifted, but those will be announced at each of the Sections by the chairman.

The Committee and, I am sure, the President, are very eager to have the meetings take place sharply on time and according to schedule. The chairmen of the various sessions will please start their meetings at exactly the time when they are supposed to. Members of the Program Committee will be available if anything happens, such as if one of the chairmen cannot be at a session, and they will start the meeting. It is very important for those of you who are presenting papers to please hold to your time limits. The Chairman will try and do that, but it is much more pleasant for the essayist as well as for the chairman to have the man who reads the paper watch his time himself.

CHAIRMAN HAMILTON.—There are a couple of misprints in the program. The Chairman of Section III on Wednesday morning will be Dr. James Watson.

The Chairman of the program on Psychopathology on Thursday morning will be Dr. John G. Lynn, IV.

Now the report of the Secretary-Treasurer.

DR. BARTEMEIER.—I have first an announcement to give you, a message from our distinguished colleague in Mexico, Dr. Samuel Ramirez Moreno. Dr. Moreno wires us as follows: "In the name of the Secretary of Public Health and Assistance of Mexico and in my own, I want to express our wishes for the success of this annual meeting in its benefit to science and to your patients. Sincerely yours, Dr. Samuel Ramirez Moreno."

I have two requests: Will the chairmen of the Sections kindly give me the names of the newly elected officers of the Sections so that they may be announced during the course of our meeting on Friday?

I have also been requested to announce that the Membership Committee will meet with Dr. Ackerly

for a brief special meeting at twelve o'clock noon today in Room 1148.

There will also be a meeting of the Committee on Legal Aspects of Psychiatry at two o'clock today in Conference Room No. 3 on the ballroom floor. So much for announcements.

It is my pleasure to give you the following report regarding our membership as of April 1, 1947:

We had a total membership in our Association of 3,972 as of April 1, 1947. This represents a net increase in our membership of 338 members during the past year. Our membership has more than doubled in the past ten years. The breakdown of the total membership is as follows: We have 19 honorary members, 98 life members, 18 corresponding members, 935 Fellows, 2,485 members and 417 associate members, a total of 3,972 members of the Association as of April 1st of this year.

I will now give you a brief summary of our financial situation for the period from April 1, 1946, to March 31, 1947. This is the auditor's report.

The income from our general account amounted to \$34,742.65. The income from the JOURNAL account amounted to \$13,815.65. The income from the annual meeting in 1946 amounted to \$13,184.15. The total income to the Association from these three sources—the general account, the JOURNAL, and the annual meeting—amounted to \$61,742.45.

With regard to the expenses: The expenses from the general account amounted to \$33,503.02. The expenses connected with the AMERICAN JOURNAL OF PSYCHIATRY amounted to \$17,723.53. The expenses in connection with the annual meeting in Chicago amounted to \$13,188.98, so that our total expenses during the past fiscal year amounted to \$64,415.53 and our total income was \$61,742.45. Our deficit for the last year was \$2,673.08.

Now a recapitulation of all our resources: We have a total cash balance on hand of \$22,099.16. Our net resources including this \$22,099.16, together with United States government bonds, Canadian government bonds, meeting account and the AMERICAN JOURNAL OF PSYCHIATRY account, in the Chase National Bank, amount to \$42,747.68.

CHAIRMAN HAMILTON.—This report has been acted on by the Council and is brought you for your information. In due time you will be called on to corroborate and approve all the acts of the Council, so you will approve this indirectly unless you find some errors meanwhile.

The Committee on Resolutions will be as follows: Chairman, Dr. Harry A. Steckel of New York, Dr. Carl J. Hedin of Maine, Dr. Edwin E. McNiel of California, Dr. Charles G. Stogdill of Ontario, and Dr. Charles A. Zeller of Michigan. I ask that all the members of the Committee report to Dr. Steckel as soon as they can and he will inform them when the meeting of the Committee will be held.

One of the serious and more saddening moments of the annual meetings, as time goes on, is when we pay respect to the memory of our deceased colleagues. Father Kelly, one of our two Fellows who are also clergymen, was to have pronounced the benediction. He has wired us that, owing to

injuries from an automobile accident, he will not be able to be here. We have sent a proper telegram of sympathy to Father Kelly.

The Secretary will read the list of deceased members. During that reading the audience will rise. At the end, I will read you a part of Father Kelly's telegram. I will ask you to stand for a moment after that in silence and will give you a signal by the gavel to resume your seats.

While the audience stood, Dr. Bartemeier read the list of the deceased members as follows:

- G. G. Kineon, Gallipolis, Ohio, died Aug. 21, 1943.
- A. Whitefield Hawkes, New York, N. Y., died Dec. 17, 1943.
- A. W. Foertmeyer, Cincinnati, Ohio, died Jan. 24, 1943.
- Elmer N. Carter, Huntington, W. Va., died June 19, 1944.
- Orland R. Blair, Clarks Summit, Pa., died Oct. 21, 1944.
- S. Stanley King, New Rochelle, N. Y., died Jan. 10, 1945.
- William W. Richardson, Mercer, Pa., died June 19, 1945.
- James W. MacNeill, N. Battleford, Canada, died July 1, 1945.
- Clifford B. Howard, Ogdensburg, N. Y., died Aug. 10, 1945.
- George J. Wright, Pittsburgh, Pa., died Oct. 1, 1945.
- Robert M. Elliott, Canandaigua, N. Y., died Oct. 5, 1945.
- C. E. Shinkle, Cincinnati, Ohio, died Oct. 5, 1945.
- Gomer S. Llewellyn, Mayview, Pa., died Nov. 21, 1945.
- Arthur J. White, Scranton, Pa., died Nov. 21, 1945.
- Benjamin Warren Black, Oakland, Cal., died Dec. 1, 1945.
- Arthur E. Pattrell, Baltimore, Md., died Dec. 17, 1945.
- Frank S. Rankin, Chicago, Ill., died Dec. 21, 1945.
- T. B. Bass, Abilene, Tex., died Dec. 22, 1945.
- Lorne W. Yule, Columbus, Ohio, died Feb. 17, 1946.
- Michael F. Lonergan, New York, N. Y., died Mar. 7, 1946.
- Leo Wolfson, Poughkeepsie, N. Y., died Mar. 15, 1946.
- Walter S. Jensen, Washington, D. C., died Apr. 4, 1946.
- Daniel Plouffe, Montreal, Canada, died Apr. 6, 1946.
- Shelton G. Silverburg, Evansville, Ind., died Apr. 6, 1946.
- Earle V. Gray, Helmuth, N. Y., died Apr. 21, 1946.
- Thomas P. Prout, Summit, N. J., died Apr. 26, 1946.

Miner H. A. Evans, Boston, Mass., died May 5, 1946.

Jacob Kasanin, San Francisco, Cal., died May 5, 1946.

Bruno Daniel, Ward's Island, N. Y., died May 21, 1946.

Blakely R. Webster, Plattsburg, N. Y., died Sept. 5, 1946.

Lilla Ridout, Bryn Mawr, Pa., died June 27, 1946.

Glenn S. Weaver, Big Springs, Tex., died May 10, 1946.

Norman G. Tufford, Detroit, Mich., died Aug. 10, 1946.

James E. Smith, Petersburg, Va., died Aug. 15, 1946.

Florence Chapman, Akron, Ohio, died Sept. 10, 1946.

Louis Malinash, Brooklyn, N. Y., died Sept. 20, 1946.

Christopher C. Beling, Newark, N. J., died Dec. 1, 1946.

Walter Schilling, San Francisco, Cal., died Dec. 16, 1946.

Edouard Toulouse, Paris, France, died Jan. 19, 1947.

Arthur S. Pendleton, Raleigh, N. C., died Jan. 26, 1947.

Clara Louise McCord, Philadelphia, Pa., died Feb. 8, 1947.

Mary J. Walters, Atlanta, Ga., died Mar. 7, 1947.

CHAIRMAN HAMILTON.—“May God be with you and all my colleagues of the Association in your deliberations and in your continuing to be sound leaders of our most important profession. May the deceased members whose names you read receive from Him their deserved reward for devotion to the afflicted. May they rest in peace.”

There will be a meeting of the Council at 3.30 in Conference Room No. 2 where it met yesterday and the day before. The Council are informed of this, but any representatives of Affiliate Societies who have come in this morning will recall that their presence is not only welcome but sought.

The session adjourned at 11.30 a.m.

## TUESDAY MORNING SESSION

MAY 20, 1947

The general session of the American Psychiatric Association convened at 9.00 o'clock in the Grand Ballroom of the Hotel Pennsylvania, Dr. Samuel W. Hamilton presiding.

PRESIDENT HAMILTON.—The meeting will come to order. Gentlemen, the Chairman of the Nominating Committee, Dr. Earl D. Bond, will report.

DR. BOND.—*Mr. President, Ladies, and Gentlemen:* The Nominating Committee presents a unanimous report. It was convinced that at last year's meeting the Association showed that it wanted to have an Association vote on many of its officers.

The Committee commenced the discussion of nominating machinery, as an experiment, the balloting of which will be held today, and for the good of the Association, three outstanding men have allowed their names to go on the ballot for President-Elect for 1947 and 1948. All these men deserve the sincere thanks of the Association. The Committee nominates for President-Elect Dr. Nolan D. C. Lewis, of New York; Dr. William C. Menninger, of Kansas, and Dr. Arthur P. Noyes, of Pennsylvania.

For three Councillors, the Committee proposes the following: Dr. William Malamud, of Massachusetts; Dr. Mesrop A. Tarumianz, of Delaware; Dr. George S. Johnson, of California; Dr. Robert H. Felix, of the District of Columbia, and Dr. Frank H. Luton, of Tennessee.

You will notice that two names have been omitted from the printed ballot. One of these is Dr. John Romano. His name is withdrawn at his request for reasons acceptable to the Committee. The other name is that of Dr. Donald W. Hastings, whose name is withdrawn because he will not become a Fellow at this meeting, as was expected.

The Committee was asked by the Council to make nominations for the office of Treasurer separate from that of Secretary, and so it recommends, for Secretary, Dr. Leo H. Bartemeier of Michigan; and, for Treasurer, Dr. Howard W. Potter of New York.

For Auditor, the Committee recommends Dr. Conrad S. Sommer of Illinois.

CHAIRMAN HAMILTON.—You have read the report, gentlemen, are there any objections?

In the absence of objections, the report is accepted, and nominations are in order from the floor. Are there nominations for the office of President-Elect?

Hearing none, the Chair will proceed. Are there any nominations for the office of Secretary?

Are there any nominations for the office of Treasurer? Are there any nominations for the office of Councillor?

On motion by Dr. Charles Englander, seconded by Dr. Spafford Ackerly, it was voted to close the nominations.

CHAIRMAN HAMILTON.—Ballot boxes have been placed in the polling booth near the registration desk. The polls are open from nine o'clock until four.

The Board of Tellers will consist of the following: Dr. Marion R. King, of the District of Columbia; Dr. Melvin J. Rowe, of California; Dr. Newton J. T. Bigelow, of New York; Dr. Coyt Ham, of South Carolina; Dr. Louis V. J. Lopez, of Colorado; and Dr. Sidney G. Chalk, of Ontario. Those Tellers who have not seen Dr. King will please report to him. Dr. King is Chief Teller.

The Chair knows of no other business to take up at this time. The Tellers will have a long job, and I would ask that you make their work as convenient as you can, please. The Chair will be avail-

able in the late afternoon to hear the announcement of the vote. It is not planned to call the Association together for that purpose, although we will pass the word around.

Members and Fellows are entitled to vote.

The Tellers will proceed to the registration room and commence their duties. They will be ready to receive you all there in a very few minutes.

We have printed ballots with the names of the nominees that were read to you, and which also contain two names which you can disregard or strike off, together with space for writing in other names. However, since no other nominations have been made, that space is unnecessary at the present time.

Gentlemen, our constitution says that the President-Elect shall succeed to the Presidency at the end of the Convention session. It says that the retiring President shall become Councillor. It also says, in another place, that all the officers shall be elected.

Unless there be objection from the floor, the Chair directs the Secretary to cast a ballot for the President-Elect to become President, and for the out-going President to become Councillor.

Hearing no objection, we will do it that way. The constitution does not intend to have any conflicting areas, but I thought we would do this so our records will be all straight. You see, we are a corporation, incorporated under the laws of the District of Columbia.

I believe I have spoken long enough now and that the Tellers are ready. The session, therefore, is adjourned.

Before you leave, let me remind you of another thing: It is strongly, urgently requested that you obtain your tickets both for the round table meetings and the banquet today, instead of waiting until tomorrow, when some late-comers will be in and wanting to get to the booth. Please buy all the tickets that you are going to want, if you have now made up your mind about them, today. The balloting will proceed.

The session adjourned at 10.00 a.m.

### WEDNESDAY MORNING SESSION

MAY 21 1947

The business meeting of the American Psychiatric Association convened at 9.00 o'clock in the Grand Ballroom of the Hotel Pennsylvania, New York City, New York, Dr. Samuel W. Hamilton presiding.

PRESIDENT HAMILTON.—The meeting will come to order. Some business comes over from yesterday. Our Tellers were busy until 8.00 o'clock last night. At this time, before their announcement, I wish to convey the thanks of the Association to them, and also to the two ladies who served as poll clerks, for their earnest, intelligent, and very faithful attention to their duties.

The chief teller, Dr. Marion R. King, will present the report of the election.

DR. KING.—The number of ballots and the number of votes cast during the annual election of May 20, 1947 are as follows: Total number of ballots, 562; total number of votes for candidates listed on the printed ballots for President-Elect, Dr. Nolan D. C. Lewis, 198; Dr. William C. Menninger, 230; Dr. Arthur P. Noyes, 133.

For Secretary, Dr. Leo H. Bartemeier, 519. For Treasurer, Dr. Howard W. Potter, 506. For Councillors, Dr. Robert H. Felix, 388; Dr. George S. Johnson, 281; Dr. Frank H. Luton, 170; Dr. William Malamud, 399, Dr. Mesrop A. Tarumianz, 252. For Auditor, Dr. Conrad S. Sommer, 467.

There were also a total of twenty names written in the blank spaces on the ballots by the voters: one name with one vote for president-elect, two names with one vote each for secretary, two names with one vote each for treasurer, thirteen names with a total of forty-nine votes for councillors and two names with one vote each for auditor.

The final results of the election are as follows: Elected for president-elect, Dr. William C. Menninger; for secretary, Dr. Leo H. Bartemeier; for treasurer, Dr. Howard W. Potter; for councillors, Dr. William Malamud, Dr. Robert H. Felix, and Dr. George S. Johnson; for auditor, Dr. Conrad S. Sommer.

PRESIDENT HAMILTON.—Let me call your attention to the fact that the auditors have also given us a very careful report. In the absence of objection on constitutional or other grounds, I declare these gentlemen elected: William C. Menninger, Leo H. Bartemeier, Howard W. Potter, William Malamud, Robert H. Felix, George S. Johnson, and Conrad S. Sommer to the respective offices for which they were nominated.

There will be a meeting of the Council this afternoon immediately following the session. The newly elected councillors take office immediately upon election.

I would like to say a word to the assembly about our retiring councillors. It has been a great privilege to serve with this Council. Those going off include Dr. Waggoner, who brings to us the experience and the valuable teaching ability that come from a great university; Dr. George Alexander Young, an admirable example of urbanity and effectiveness, of what the private practitioner can be, and now that some of the younger private practitioners are finding voice they may well look to what has been done in the Omaha region, which is in no small measure the result of the activities of a private practitioner; Dr. Thomas A. Ratliff, a fine outspoken representative of the progressive group, and Dr. Arthur H. Ruggles, previously secretary, president-elect, and president of this organization and upon whom has fallen in no small measure the mantle of the late Thomas W. Salmon. When there are difficulties and when there are conflicting views to be reconciled and when there are personal tangles that need to be untangled, there is no one more valuable to this Association and his colleagues than Dr. Ruggles.

The secretary will read to you a constitutional

amendment which was duly noted to you a year ago and has been printed in the JOURNAL.

DR. BARTEMEIER.—As printed in the JOURNAL in the January issue of the present year: "Notice to members of the American Psychiatric Association: In accordance with the provisions of Article 8 of the constitution of the Association and in accordance with the vote of Council, notification is hereby given that at the 1947 meeting the following amendments proposed by the Committee on Membership will be presented for vote:

"Strike out Article 3 Section 5 and insert the following in its place: Section 5—Members hereafter shall be chosen from physicians who have specialized in the practice of psychiatry for at least three years and after fulfilling the requirements of associate members. Members shall be recommended to fellowship as it becomes apparent that they deserve this recognition.

"Amend Article 3 Section 6 to read as follows: Section 6—Associate members shall be physicians who have had at least one year's practice in a mental hospital or its equivalent."

PRESIDENT HAMILTON.—In my opinion, the essence of this is that it is a little harder for us to elect as a member a person who has not had hospital experience. One of our quite prominent members who addressed you Monday would have been a little harder to elect as a member when he was elected two or three years ago, under the constitution if amended in accordance with these recommendations.

The proponent of the amendments is Dr. Ackerly and I will ask him to come to the rostrum and explain to you why he and the committee think that this further restriction should be made.

DR. ACKERLY: May I read the section of the constitution, Article 3 under membership as it now stands? That is, concerning these two sections. Section 4, Article 3, now reads: "Associate members shall be physicians who have had at least one year's practice in a mental hospital." Section 5 reads as follows: "Members hereafter shall be chosen from physicians who have specialized in the practice of psychiatry for at least three years." Now it seemed to the Committee on Membership that this Association would wish to have on record in the constitution some requirement whereby a member must have some experience in a mental hospital or its equivalent. It was felt by the Committee that this new wording would put the American Psychiatric Association on record as favoring one year's practice in a mental hospital for members as well as associate members and, at the same time, keep the meaning of the articles of this Association broad enough not to exclude any desirable member.

These amendments were adopted on motion by Dr. Ackerly, which was seconded by Dr. Ruggles.

PRESIDENT HAMILTON.—The Secretary will inform you of some amendments proposed for action next year.

DR. BARTEMEIER.—The following amendments are proposed by Dr. Samuel W. Hamilton in a communication to me dated February 10, 1947: "Dear Doctor: Please be informed that the following amendment to Article 6 of the constitution and two amendments to Article 7 are respectfully proposed for action at our annual meeting next year." (That is, 1948).

"Article 6: Add as follows, Section 4: The Council may fill vacancies occurring among elected officers. Article 7, strike out the words 'or Council.'"

May I read this first article? In article 7 under "powers" our present constitution states, "The president shall preside at the annual and special meetings of the Association or Council." Now the proposed amendment is to strike out "Or Council."

The additional amendment that is proposed is that "the Council shall choose annually a fellow of the Association as moderator to preside at all its sessions. In case the moderator be not a member of the Council he shall have no vote."

Then Dr. Hamilton adds: "It may be remarked that these amendments have been discussed informally with councillors and others for two years and the present form is the result of such deliberations."

PRESIDENT HAMILTON.—I mentioned these matters in my report to you Monday. Perhaps sometime during the year I shall bring the subject up again. They have been modified from the original wording that was proposed by me.

I sponsor them with entire satisfaction in their present form, and no discussion is necessary now because you have a year to think about that.

The next order of business is the election of members. The Secretary will inform you about the recommendations of the Council.

DR. BARTEMEIER.—The acts of the Council at its December meeting on December 14-15, 1946 have already been distributed.

The Council recommends for election to associate membership a total of 95 names. For reinstatement as an associate member, one; for election to membership, 356; reinstatement as members, seven; transfer from associate member to member, 194; transfer from member to fellow, 75; reinstatement as a fellow, two; corresponding member, two; honorary member, two. The second one is Dr. J. R. Rees of London.

PRESIDENT HAMILTON.—If the Association wishes, these names will be read to you individually, but you have them before you with the exception of the last name, Dr. John Rawlings Rees who is well known to you, whom you heard Monday, and whom you will hear tonight.

Dr. Rubenstein moved that the secretary cast a ballot for the election of these persons in their respective classes and the reinstatement of certain ones who have formerly been



members. Dr. Heldt seconded the motion and it was carried.

PRESIDENT HAMILTON.—I would like to inform you of the presence of several persons from abroad, in addition to those whom you have already seen and perhaps heard: Dr. Baron from the Argentine, and if he is in the audience at the moment we would appreciate his standing but I don't think he is here this morning; Dr. O'Reilly of Birmingham, England, and Dr. Sargent of England; Mrs. Gillespie, the widow of our former honorary member, R. D. Gillespie.

The Secretary will give you the report of the Council.

DR. BARTEMEIER.—Upon the request of the Maryland Association of Private Practicing Psychiatrists supported by the opinions of 899 fellows and members, the Council recommends the establishment of a Section for this group.

The New York Society for Clinical Psychiatry has applied to become an affiliate society. A copy of its constitution and bylaws, together with a list of its members, has been filed and the Council recommends that the society be accepted.

It has been voted to accept a gift of \$25,000 from the estate of the late Lt. Lester N. Hofheimer to establish an annual prize of \$1,500 for eighteen years for distinguished research contributions to psychiatry. A self-perpetuating board composed of fellows and members, one of whom will be the president ex-officio, will award this prize at annual meetings of this Association.

The membership dues of Dr. John F. Norris have been remitted until he resumes practice.

The Council voted to revise the wording of the membership certificate and the fellowship obligation.

Telegrams have been sent to the chairmen of the House Committee on Veterans Affairs and the Committee on Appropriations in the House and Senate, urging that the appropriations for the Neuropsychiatric Division of the Veterans Administration be increased in order to maintain high standards of medical care for veterans.

Dr. C. C. Burlingame has been delegated to represent the Association at coming meetings of the Royal Medico-Psychological Association and the Netherlands Psychiatric Society.

It has been voted to send a copy of the report of the Committee on Psychiatric Social Work to the superintendents and medical directors of mental hospitals in the United States and Canada.

One dollar from the dues of each fellow and member is to be allotted to the JOURNAL account.

The Council decided that within sixty days prior to the annual Council meeting, the Committee on Membership shall distribute to Council their approved list for all classes of membership.

An appropriation of \$1,500 was voted to the Committee on Psychiatry in Medical Education.

A special committee will be appointed to draw up a statement of psychiatric principles and practice.

Upon the recommendation of the Committee on Standards and Policies, it was voted to create a Board for the rating of mental hospitals, the funds to be obtained elsewhere.

A re-issue of the centenary volume in a cheaper edition is approved for publication.

The Secretary has been instructed to send notes of regret at the absence from its meeting of the following four past-presidents of the Association: Drs. Adolf Meyer, Clarence O. Cheney, James V. May, and C. Fred Williams.

Questions having been raised about certification of psychiatrists working in institutions for mental defectives, the problem was referred to the Committee on Standards and Policies for consideration, and Dr. Bowman was delegated to confer with the American Board of Neurology and Psychiatry about the matter.

The Council voted that the Executive Committee investigate the desirability of our securing membership in the Social Science Research Council.

The Association will pay \$75 to the American Registry of Pathology as its share of the expense of the preparation and distribution of pathological slides.

The Council approved the recommendation of the Executive Committee that the Thursday morning session be considered a meeting of The Committee of the Whole.

On motion by Dr. Sandy, seconded by Dr. Ackerly, the report of the Council was voted accepted and approved.

PRESIDENT HAMILTON.—Some of these matters will receive further comment in the JOURNAL. You can see that some of them bring us great gratification and others are knotty problems that we report to you because we are endeavoring to untangle them.

Will Dr. Burkes come forward? I had the pleasure on Dr. Overholser's nomination of appointing Dr. Burkes of Portland, Oregon, Chairman of the Committee on Arrangements for next year's meeting.

He is here and desires to say something, although I don't know whether he will talk about the climate or roses or what else, but he wants to say something about the relation of this Association to Portland, Oregon, in 1948.

DR. BURKES.—I shall omit speaking about the weather. This year we had the most perfect weather that I have ever known since I have been in Portland, and next year we can promise you nothing so far as the weather is concerned. However, the Weather Bureau informed me that for this same period in the past 40 years the average rainfall has been 20 one-hundredths of an inch for those 5 days. This may help some.

The hotel situation in Portland is adequate, we feel, to handle this crowd. We have in the twelve leading hotels, a total of 2,700 hundred rooms and we have been promised 850 double rooms and some 2,300 single rooms. That has been assured us.

We may have more at that time than these 12 more acceptable hotels. To relieve some anxiety

about this, I might state that the American Medical Association met in Portland in 1929 and the crowd was handled adequately; and a few years later the American Legion met there with a much larger number; and this coming July the Elks Convention will be held in Portland, and they anticipate somewhere in the neighborhood of some 30-40,000 people.

The medical activities, including the scientific and commercial exhibits and all the things pertaining to the scientific programs, will be held in the Masonic Temple. It is centrally located and is only half a block to 2 or 3 blocks from a number of the hotels and only some 8 or 10 blocks from the hotel which is the farthest away.

The ballroom floor, which is on the ground floor, we have reserved for the exhibits. We have there some 6,100 square feet of space that can be used in addition to many square feet on the promenade that extends the full length of the auditorium on two sides and one end. The room on the second floor will seat some 5-600 and there are three other rooms that will seat 250 each. On the third floor, the Shrine Hall can seat 1,700 people. There are a number of smaller rooms available in addition to one dining room that will seat up to 300.

All activities not pertaining to the scientific program will be held at the Multnomah Hotel. The banquet and many of the dinners and perhaps the round table discussions could be held at the Masonic Temple if it were not for the meals, but we have ample space and some to spare in the Multnomah Hotel to take care of that activity.

We are very happy and feel quite honored to have Portland accepted as the host city for the

coming convention and we shall try to see that none of you who might attend are disappointed.

PRESIDENT HAMILTON.—If it turns out that any of our membership will be in England or Holland this summer, we shall be happy to designate additional delegates to the annual meetings of our sister associations in those countries. If any of you decide to make that trip, please be so good as to inform the secretary.

It would be a convenience at the present time if someone would move ratification of the acts of Council and the Executive Committee taken since the last annual meeting. Would someone care to do that? This being a corporation it is well to have that kind of a motion on the record every year.

Dr. Dunton moved that the acts of Council and the Executive Committee taken since the last annual meeting be ratified. Dr. Stevenson seconded the motion and it was carried.

PRESIDENT HAMILTON.—Let me announce again, please, that immediately after the afternoon session the Council will meet in Parlor A, and those gentlemen who are newly elected will report for duty. Please get your tickets for tonight's banquet as soon as you possibly can. There will be a goodly number and we would like to have a complete check, if possible, because it will aid the management. We will now have the report of the auditors.

DR. BARTEMEIER.—This report is for the period from April 1, 1946, to March 31, 1947:

#### INCOME

##### *Income—General Account:*

###### *Membership Dues*

Back Dues .....	\$1,969.50
1948-49 .....	1.00
1947-48 .....	184.66
1946-47 .....	28,677.00
Refund—Annual Meeting .....	1,700.00
Fellowship Certificates .....	295.00
Membership Certificates .....	66.00
Biographical Directory .....	2.75
Rent—Committee Psychiatric Nursing.....	700.00
Rent—AMERICAN JOURNAL OF PSYCHIATRY.....	300.00
Interest—Savings Account and Bonds.....	754.70
Insurance Refund .....	92.04

Total Income—General Account..... \$34,742.65

##### *Income—AMERICAN JOURNAL PSYCHIATRY:*

Advertising .....	\$5,527.52
Subscriptions .....	7,919.76
Back Numbers .....	290.28
Miscellaneous .....	78.09

Total Income—JOURNAL Account..... 113,815.65

##### *Income—Annual Meeting—1946*

Commercial Exhibits .....	\$6,630.00
Banquet Gifts \$500. (Abbott Labs., \$300. Chicago Neurological Society, \$200.) Tickets, \$3,324.00.....	3,824.00
Carried forward .....	\$10,454.00

Brought forward .....	\$10,454.00	
Cocktail Party (Committee on Arrangements, \$471. Eli Lilly Co., \$100.) .....	\$571.00	
Registration .....	947.00	
Programs .....	12.15	
Subsidy American Psychiatric Association.....	1,200.00	
Total Income—Annual Meeting.....		13,184.15
Total Income .....		<u>\$61,742.45</u>

## EXPENSES

*Expenses—General Account:*

Salary—Executive Assistant .....	\$6,199.92	
Clerical Salaries .....	4,181.17	
Printing .....	4,419.30	
Committee Expense .....	6,224.67	
Joint Committee on Personnel and Mental Hygiene.....	4,225.00	
Fellowship Certificates .....	46.25	
Membership Certificates .....	40.30	
Telephone and Telegrams.....	732.82	
Electricity .....	81.24	
Rent .....	1,952.60	
Postage .....	1,281.40	
Insurance and Annuities.....	552.86	
Check Tax .....	26.73	
Travelling Expenses—Austin M. Davies.....	37.51	
Foundation Expense .....	1,999.07	
Office Supplies .....	326.98	
Old Age Benefit Tax.....	87.36	
Income Tax—Withholding .....	128.70	
Miscellaneous .....	959.14	
Total Expenses—General Account.....		\$33,503.02

*Expenses—AMERICAN JOURNAL OF PSYCHIATRY:*

Printing—JOURNAL .....	\$10,813.48	
Other Printing .....	101.55	
Editorial Assistance .....	2,055.54	
Rent .....	300.00	
Medical Publication Bureau		
Advertising Commission .....	1,522.76	
Printing, Promotional and Mailing.....	214.35	
Salaries .....	2,190.33	
Postage .....	393.50	
Check Tax .....	4.64	
Mailing Back Numbers.....	64.54	
Miscellaneous .....	62.84	

Total Expenses—JOURNAL Account..... 17,723.53

*Expenses—Annual Meeting, Chicago, Ill.*

Commercial Exhibits—(Commission, \$1,675.12).....	\$2,768.65	
Scientific Exhibits .....	142.75	
Final Program and Postage.....	1,020.22	
Movies, Slides, Theater, Operators and Screen.....	482.65	
Cocktail Party .....	1,024.90	
Badges and Ribbons.....	180.21	
Travelling Expenses .....	464.32	
Registration Cards .....	31.75	
Committee on Public Education.....	247.18	
Committee on Standards.....	40.54	
Psychiatric Foundation .....	1.19	
Committee on Nursing.....	23.40	
Committee on Program.....	39.40	
Carried forward .....	\$6,486.56	

Brought forward .....	\$6,486.56	
Council .....	\$328.49	
Honorarium .....	305.36	
Banquet (Including Orchestra, Menus, Dance, Etc.) .....	3,213.11	
Tips .....	109.00	
Reporting .....	215.14	
Page Boys, Ushers and Watchman .....	259.70	
Expressage .....	48.78	
Telephone and Telegrams .....	66.21	
Ladies Committee .....	67.45	
Refund Subsidy (Including \$500 1944 Annual Meeting) .....	1,700.00	
Miscellaneous .....	408.58	
Total Expenses—Annual Meeting .....		13,188.98
Total Expenses .....		\$64,415.53
Less: Total Income Brought Forward .....		61,742.45
Excess of Expenses Charged to Surplus .....		\$2,673.08

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR PERIOD APRIL 1, 1946, TO  
MARCH 31, 1947

*Cash Receipts:*

Membership Dues		
Back Dues .....	\$1,969.50	
1948-49 .....	1.00	
1947-48 .....	184.66	
1946-47 .....	28,677.00	
Fellowship Certificates .....	295.00	
Membership Certificates .....	66.00	
Biographical Directory .....	2.75	
Rent—Committee Psychiatric Nursing .....	700.00	
Rent—AMERICAN JOURNAL OF PSYCHIATRY .....	300.00	
Interest—Savings Accounts and Bonds .....	754.70	
Insurance Refund .....	92.04	
Refund Annual Meeting .....	1,700.00	
Total Income .....		\$34,742.65

*Cash Disbursements:*

Salary—Executive Assistant .....	\$6,199.92	
Clerical Salaries .....	4,181.17	
Printing (1945-Member List \$382.50, 1946-Member List \$2,920.63) ..	4,419.30	
Committee Expense .....	6,224.67	
Fellowship Certificates .....	46.25	
Joint Committee for Personnel and Mental Hygiene .....	4,225.00	
Membership Certificates .....	40.30	
Telephone and Telegrams .....	732.82	
Electricity .....	81.24	
Rent .....	1,952.60	
Postage .....	1,281.40	
Insurance and Annuities .....	552.86	
Check Tax .....	26.73	
Travelling Expense—Austin M. Davies .....	37.51	
Foundation Expense .....	1,999.07	
Office Supplies .....	326.98	
Old Age Benefit Tax .....	87.36	
Income Tax—Withholding Account (To Be Refunded) .....	128.70	
Miscellaneous .....	959.14	
Total Disbursements .....		33,503.02

Excess Receipts over Disbursements .....	\$1,239.63
Add: Cash Balance, April 1, 1946 .....	20,859.53
Cash Balance, March 31, 1947 .....	\$22,099.16

*Journal Account*STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR PERIOD APRIL 1, 1946, TO  
MARCH 31, 1947*Cash Receipts:*

Subscriptions .....	\$7,919.76
Advertising .....	5,527.52
Back Numbers .....	290.28
Miscellaneous—Reprints, Etc. ....	78.09

Total Cash Receipts..... \$13,815.65

*Disbursements:*

Printing (Vol. 102, No. 5-Vol. 103, No. 2—4 issues).....	\$10,813.48
Other Printing .....	101.55
Editorial Assistance	
Volume 102, No. 5 to Volume 103, No. 4.....	1,031.23
Miss Lavell—Salary .....	808.38
Miss Lavell—Travelling .....	115.93
Rent—Office .....	100.00
Medical Publication Bureau	
Commission—Vol. 102, No. 5-Vol. 103, No. 3.....	1,522.76
Advertising Expense .....	214.35
Rent .....	300.00
Salaries	
Eva Borduk—6 Months.....	1,250.04
Jean Strenkert—6 Months.....	940.29
Postage .....	393.50
Check Tax .....	4.64
Mailing Back Numbers.....	64.54
Miscellaneous .....	62.84

17,723.53

Excess Disbursements over Receipts..... 3,907.88

Add: Cash Balance March 31, 1946..... 6,472.88

Cash Balance March 31, 1947..... \$2,565.00

## SCHEDULE OF CASH AND RESOURCES, MARCH 31, 1947

	Book Number	Balance
Chase National Bank.....		\$2,685.05
Union Dime Savings Bank.....	1,115,778	4,718.63
Emigrant Industrial Savings Bank.....	137,048	4,733.60
Bowery Savings Bank.....	258,266	5,036.97
Manhattan Savings Bank.....	3,557	4,924.91
Total Cash Balance.....		\$22,099.16

*Net Resources*

American Psychiatric Association (As Above).....	\$22,099.16
U. S. Government Defense Bonds.....	15,000.00
Canadian Government Bonds.....	3,057.00
AMERICAN JOURNAL OF PSYCHIATRY—Chase National Bank.....	2,565.00
Meeting Account as Per Statement as of October 28, 1946.....	26.52
Net Resources Available.....	\$42,747.68

*Reconciliation of Surplus Account*

Surplus, April 1, 1946.....	\$45,420.76
Less: Excess Disbursements over Income for the Year.....	2,673.08
Surplus April 1, 1947.....	42,747.68

## ANALYSIS OF COMMITTEE EXPENSES, MARCH 31, 1947

	Total	Clerical	Travelling and Meetings	Telephone Postage and Printing	General
Executive .....	\$2,453.79	\$120.00	\$1,801.52	\$178.40	\$353.87
Membership .....	438.13	.....	368.29	69.84	.....
Public Education .....	70.00	.....	.....	.....	70.00
Program .....	735.13	61.41	611.57	62.15	.....
Reorganization (Special) .....	1,066.19	.....	790.58	275.61	.....
Standards and Policies.....	280.80	.....	280.80	.....	.....
Nursing (Psychiatry) .....	16.99	10.00	.....	4.84	2.15
Clinical (Psychology) .....	174.66	.....	174.66	.....	.....
Nominating .....	275.13	.....	43.45	231.68	.....
Psychology of Childhood.....	13.03	.....	.....	13.03	.....
Medical Education .....	557.19	.....	517.79	39.40	.....
Arrangements .....	2.10	.....	.....	.....	2.10
Preventive Psychiatry .....	109.17	.....	109.17	.....	.....
Military Psychiatry .....	12.97	.....	.....	12.97	.....
Forensic Psychiatry .....	19.39	.....	.....	19.39	.....
Total .....	<u>\$6,224.67</u>	<u>\$191.41</u>	<u>\$4,697.83</u>	<u>\$907.31</u>	<u>\$428.12</u>

COMMITTEE ON PSYCHIATRIC NURSING—ROCKEFELLER FOUNDATION  
SPECIAL FUND*Statement of Cash Receipts and Disbursements  
For Period April 1, 1946, to March 31, 1947**Receipts:*

Grant—Rockefeller Fund ..... \$12,404.88

*Disbursements:*

Salary—L. Anderson .....	\$4,675.00
Salary—A. Loos .....	1,764.96
Clerical Assistants .....	25.00
Travelling—L. Anderson .....	906.64
Printing .....	155.41
Telephone and Telegrams.....	195.28
Office Supplies .....	396.14
Postage .....	169.06
Advisory Committee Expense.....	642.06
Social Security Tax.....	41.89
Rent .....	700.00
Miscellaneous Expense .....	168.54
	<u>9,839.98</u>

Excess of Income over Disbursements for Period..... \$2,564.90

Add: Cash Balance, April 1, 1946..... 151.28

Cash Balance, March 31, 1947..... \$2,716.18

PRESIDENT HAMILTON.—This report is presented to you from our auditors based on the audit by Frederick Parsons, certified public accountant.

On motion by Dr. Stevenson, seconded by Dr. Pace, it was voted to accept and approve the report.

PRESIDENT HAMILTON.—I might explain something to you about the composition of the Council during the forthcoming year. It will consist again of fifteen members. We have a separate secretary and treasurer now, but there will be one vacancy.

Dr. Menninger becomes president-elect and it is impossible to fill his vacancy. There has been presented to you this morning a notice of an amendment to the constitution which will prevent vacancies of that sort in the future. We have referred the matter to Council and there is no way in which for this year we can fill the vacancy since Dr. Menninger was already a councillor. We think, however, that the Association has done well with fifteen councillors for at least twenty years and it will do just as well in the forthcoming year.

The meeting was adjourned at 10.10 a.m.

## FRIDAY MORNING SESSION

MAY 23, 1947

The business session of the American Psychiatric Association convened at 9.00 o'clock in the South Penn Top of the Hotel Pennsylvania, Dr. Samuel W. Hamilton presiding.

PRESIDENT HAMILTON.—The meeting will come to order.

The first order of business is the report on resolutions from the Committee on Resolutions, Dr. Steckel, Chairman. The report will be presented by Dr. McNeil:

DR. MCNEIL.—As is customary at the annual meetings of this Association, the Committee on Resolutions reports as follows:

*"Be It Resolved,* That the Association be complimented for the outstanding success of this, the 103rd annual meeting, which has broken all records for attendance.

"There have been 1,546 members and fellows in attendance, and the total registration, as of Thursday, May 22nd, including ladies and guests, was 3,297.

*"Be It Resolved,* That the Association record its indebtedness to its President, Dr. Samuel W. Hamilton, his masterful leadership and able guidance during an unusually difficult year. His devotion to duty has been an inspiration to all of us and has meant much to all of those who have been actively associated with him in the management of the affairs of the Association. His comprehensive address requires special mention and his vision for the future of the organization bespeaks a capacity for prophesy such as few of us possess; and to Dr. Winfred Overholser, President-Elect, and to Dr. Leo H. Bartemeier, Secretary-Treasurer, and to the Council and Chairmen and members of the various committees the Association owes deep appreciation for their collaboration, which has resulted in one of the most successful years of our organization.

*"Be It Resolved,* That commendation be expressed to Dr. William Malamud and to the members of his Program Committee for the manner in which the program was organized and for the interesting papers presented and topics discussed.

*"Be It Resolved,* That the Association record its appreciation to Dr. Frederick W. Parsons, Chairman, and to Dr. C. Charles Burlingame, Vice-Chairman, and their associates on the Committee on Arrangements for the efficient manner in which they discharged their duties, making it possible for thorough enjoyment of the hospitality of a great city to all those in attendance.

*"Be It Resolved,* That special mention be made of and gratitude expressed to Mrs. Robert B. McGraw, Chairman, and her associates on the Women's Arrangement Committee, for the exceptional program of entertainment provided for the wives and lady guests of the Association.

*"Be It Resolved,* That special appreciation be expressed to Dr. Clarence B. Farrar, Editor of

our JOURNAL, who has unstintingly devoted much time without remuneration to the end that our publication has attained outstanding recognition in its field.

*"Be It Resolved,* That the gratitude of the Association be expressed to Mr. Austin M. Davies, its Executive Assistant, and his office staff for their efficient service rendered throughout the past year.

*"Be It Further Resolved,* That deep appreciation be expressed to Mr. Pierre S. du Pont, to Dr. Arthur H. Ruggles, and to Dr. William C. Menninger for their outstanding contribution to the successful program of The Psychiatric Foundation on Wednesday afternoon.

*"Be It Resolved,* That this Association draw the attention of the governors and legislative bodies of our various states to the present competition which exists between the state institutions on the one hand and the Veterans Administration and other organizations on the other, with special reference to the personnel—medical, nursing, and ward—of our mental hospitals and—

*"Be It Further Resolved,* That this Association earnestly recommends that immediate steps be taken to remedy this condition so that the standard of care in our state mental hospitals be maintained at the highest possible level.

*"Be It Resolved,* That the thanks of the Association be tendered the management of this hotel for the excellence of the general arrangements, which has contributed so much to the comfort and enjoyment of our members and guests.

Respectfully submitted,

H. A. STECKEL, M. D., *Chairman*

CARL J. HEDIN, M. D.

EDWIN E. MCNIEL, M. D.

CHARLES G. STODDILL, M. D.

CHARLES A. ZELLER, M. D."

PRESIDENT HAMILTON.—You have heard the report of the Committee on Resolutions. What has been said about the President is somewhat exaggerated, for his address did not go into predictions. However, what was said about the officers and the committeemen is more than justified.

Dr. Zabriskie moved the acceptance of the report. Dr. Bartemeier seconded the motion, and it was so voted.

PRESIDENT HAMILTON.—The order of business now calls for the introduction of the President-Elect. Aside from this being the customary form of procedure, one hardly needs introduce a man who is more widely known than any but a few of the psychiatrists in this country.

Dr. Overholser has been called upon to participate in the proceedings of many scientific organizations. I see his name on the programs of the American Association for the Advancement of Science, and on various organizations' programs. Not only is he appreciated in such societies and in more popular gatherings, but he is also known, and his services in demand, in the ecclesiastical world, as most of you probably know.

To him I turn over this gavel as a symbol of the confidence that you have placed in him for the coming year, and we know that his knowledge, his experience, his wide acquaintance, and his fairness and judgment will cause the business of the Association to be done not only with order and dispatch but also with an appreciation of all the various currents of thought that enter into our activities.

In token of this, sir, if you will rise, I formally hand to you, Dr. Overholser, the gavel of the American Psychiatric Association. Dr. Overholser will hand it back. I am not leaving these responsibilities until this afternoon, but it falls on him to wield it for the next year.

DR. OVERHOLSER.—Thank you, Dr. Hamilton.

*Colleagues, Friends:* I appreciate deeply, it is needless to say, the honor that you have done here in electing me President of this organization. It is an honor and it is a responsibility.

We are the oldest national medical organization in the United States. At the rate we are growing, we shall soon be one of the largest. We live in a time of change. Some of you have indicated there is an interest in modifying the manner in which the organization is conducted, and during the coming year, the Council will certainly consider seriously the possible ways of implementing any changes which seem to be called for in the face of changing needs.

There has been some talk of making the organization more democratic. I sometimes wonder, myself, whether perhaps it is not already becoming too big to be truly democratic rather than representative. It may well be that we need to have an entire change in the method of the representation of the members. However, that is simply one of the things which we have to consider and shall consider.

Once again I thank you. I assure you that I shall do everything in my power to see that the organization is run according to the wishes of the majority of the membership.

I have one official act to perform at this time before I hand the gavel back to Dr. Hamilton. I am sure that Dr. Hamilton, with his becoming and characteristic modesty, felt that perhaps the words of the Resolutions Committee were somewhat exaggerated. Those who know him do not think that they were exaggerated. He has shown during the past year—a particularly difficult year for everyone in many ways, and also particularly difficult in this Association—a fairness, an ability to try to see both sides of problems, and to point them out with good humor, with a friendly spirit. He has shown that although years bring wisdom, they do not necessarily cause sclerosis of the faculty to adjust to changing situations. It is my very pleasant privilege at this time to pin upon Dr. Hamilton's ample bosom the Past President's badge. Will you kindly rise, Dr. Hamilton?

This is, to me, merely a token of the pleasure I have had, Dr. Hamilton, in working with you. Many thanks to you on behalf of the Association.

DR. HAMILTON.—I thank you. I prize this. It was an honor that I did not expect a few years ago, and it has been a pleasure to deserve as much of it as possible. Now that I join the ranks of the distinguished persons on the top shelf, I will endeavor to see that this badge of former service is in sight at as many of our meetings as can be.

The incoming officers of the sections will be given to you by the Secretary.

DR. BARTEMEIER.—The officers of the sections for the coming year are as follows:

*Section on Private Practice*

Chairman, Wendell Muncie, Baltimore

Secretary, J. G. N. Cushing, Baltimore

*Section on Convulsive Disorders*

Chairman, H. Houston Merritt, New York City

Secretary, Willard W. Dickerson, Caro, Michigan

*Section on Forensic Psychiatry*

Chairman, George M. Lott, Long Island

Vice-Chairman, Richard L. Jenkins, Urbana, Illinois

Secretary, William H. Haines, Chicago

*Section on Psychoanalysis*

Chairman, Gregory Zilboorg, New York City

Chairman-Elect, Dexter M. Bullard, Rockville, Maryland

Secretary, Lawrence S. Kubie, New York City

*Section on Child Psychiatry*

Chairman, William S. Langford, New York City

Vice-Chairman, Mabel Ross, Buffalo, N. Y.

Secretary, Oscar J. Raeder, Boston

*Section on Military Psychiatry*

Chairman, Malcolm J. Farrell, Waverly, Massachusetts

Secretary, Norman Q. Brill, Washington, D. C.

DR. HAMILTON.—I convey to the Committee on Resolutions the thanks of the Association. They saw to it that we thanked everybody else, but they left themselves out.

Any of the Councillors or the representatives of the affiliated societies who are not already informed will please be informed that we meet this noon, twelve o'clock, in Parlor "A" for the last meeting of the Council with its present constitution.

I am reminded that the old Councillors have not all gone home and we will be more than delighted if they will come in and give us their advice. I expect before the day is over to announce the appointment of the members of the Committee for the Lester N. Hofheimer award. That will be given out at the Council meeting.

The question having been raised as to whether there will be another general business session, we leave it to you. Unless it is called for, we will not attempt to have another business session. However, the proceedings of this Council will be brought forward to the next convention. Generally speaking, I find that the members of the Association are generally trustful as regards the Council and,



having themselves elected the Council, they may well be trustful.

You may be interested in some statistics. The number of members and fellows registered is now 1,626; the number of nonmembers, 1,951, making a total of 3,577. Of course you will recognize that this figure is much in excess of any registration we have had before. The largest previous registration was at a Philadelphia convention, where we ran well over two thousand. You may recall that at Chicago we had more of our membership present than we had at Philadelphia, but our membership continues to grow. That is fine; it is magnificent, but as has already been said to you, it creates some problems in organization which I am confident the new Council will be able to meet adequately.

Possible changes in the Constitution may be in order. We have never viewed it as something fixed and immovable. We do change it from time to time, and it can be changed still more.

This is a relatively small attendance, but every one of you has twenty friends to whom you talk about the meeting. Please ask them to be very frank in forwarding to the Secretary or to any Councillor their opinions about changes that should be made; even if those changes are not made overnight, the advice is far from wasted.

The session was adjourned at 9.30 a.m.

LEO H. BARTEMEIER, M. D.,  
*Secretary.*

## MINUTES OF EXECUTIVE COMMITTEE MEETINGS

SEPTEMBER 23, 1946, NEW YORK CITY

Presiding: Dr. Samuel W. Hamilton.

Present: Dr. Leo H. Bartemeier, Dr. Winfred Overholser, Dr. Thomas A. C. Rennie, Dr. Edward A. Strecker, and by invitation, Mr. Austin M. Davies.

(1) In view of the fact that the new Membership Roster will not be available until January, 1947 it was the consensus that a list of the committee members be sent to the Chairmen of all the Committees.

(2) The Committee concurred in sending a list of all living ex-members of Council to the Nominating Committee.

(3) Dr. Bartemeier reported the tentative decisions of the joint meeting of representatives of the Committee on Reorganization and the Committee on Program, held on September 22. The committeemen recommended that the presidential address be given on Monday morning of the next annual meeting; that it follow the addresses of welcome; and that it be followed by one or two addresses of invited speakers, and the name of Surgeon General Thomas Parran was mentioned. The Committee tentatively recommended that the Monday afternoon session be occupied with four separate sessions of scientific presentations. It suggested that Tuesday be devoted to group discussions beginning at 9.00 a.m. and continuing to 7.00 p.m. as recommended in the last report of the Special Committee on Reorganization. Each of these sessions is planned to last not more than two hours. They will be staggered sessions (9.00 to 11.00—10.00 to 12.00—11.00 to 1.00—etc.) and will be presided over by members of our Association who are well qualified to act as Moderators. At each session a member of the Special Committee will speak for 10-15 minutes to open the discussion on the topics concerned.

The Joint Committee further recommended that Wednesday morning be devoted to scientific sessions. It suggested that Wednesday afternoon be devoted to a general meeting on the subject of The Psychiatric Foundation. The Committee recommended that Thursday morning be given to a general meeting for discussing and passing upon the resolutions of the Tuesday meetings. It was planned that Thursday afternoon and all day Friday be given over to scientific sessions.

Dr. Hamilton stated that our Constitution determines that the election of officers will have to take place Tuesday morning and the election of members on Wednesday morning. He discussed the advisability of providing multiple microphones for the meetings of the entire membership so that discussants from various sections of the audience might be clearly heard.

(4) It was voted that the Committee on Psychiatric Standards and Policies be granted a sum not

to exceed \$500 for travel expenses for a meeting of the Committee.

(5) It was voted to authorize a special committee to confer with the Chicago Branch of the American Civil Liberties Union regarding the constitutional rights of prisoners in connection with the administration of drugs for the purpose of lessening psychological resistances.

(6) Dr. Hamilton advised the Committee that he has seen Mr. Henry Root Stern of the Social Welfare Board of New York State and will talk with him further with regard to his request that a committee of this Association act as advisers in the management of a group of very delinquent boys. The Committee concurred with the advisability of appointing such an advisory committee.

(7) The Missouri Neuropsychiatric Society has filed application to become an affiliate society. They did not include a list of their members and the application was deferred until the next meeting of the Association.

(8) The Executive Committee voted that certain members of the Association who have expressed their intention to resign their membership be informed that the Association will not accept their resignations until their dues are paid.

(9) Dr. Hamilton intends to write the Chairmen of all Committees to obtain abstracts of committee reports for the Executive Committee to digest before the next Council meeting.

(10) The Committee voted (upon motion by Dr. Bartemeier, seconded by Dr. Overholser) to authorize the employment of an additional clerk in the offices of the Association for the preparation of the Biographical Directory at a ceiling of \$33 per week.

(11) It was voted (upon motion by Dr. Strecker, seconded by Dr. Rennie) to grant Miss Eve Borduk, who is leaving the employ of the Association, the equivalent of 2 weeks' salary in appreciation of her 7 years' efficient work and loyalty.

(12) The Executive Committee read the report of The Joint Committee on Psychiatric Placement. Dr. Rennie moved and Dr. Overholser seconded that this service be discontinued at the expiration of the present year and that a factual summary of the work of the Committee and information regarding vacancies be published in the JOURNAL. It was voted (upon motion by Dr. Strecker, seconded by Dr. Bartemeier) that the Association pay to the National Committee the salary of Mrs. Ziegler for about 6 months longer, which will amount to approximately \$1,000. The Secretary was instructed to notify the National Committee for Mental Hygiene of the above action by the Executive Committee.

(13) It was decided that the next annual meeting of the Association should occupy 5 days beginning on Monday and extending through Friday.

(14) Dr. Strecker moved and Dr. Bartemeier

seconded a motion that the registration fee for attendance by nonmembers be increased to \$5 per person and that the registration fee for those in the Armed Forces remain at \$1 per person.

(15) The Committee discussed the question of the annual banquet, thought it best to continue this function if prices permit, and hoped that it could be carried out in a more formal manner.

(16) The Committee discussed the place of the 1948 meeting of the Association. Invitations have been received from Kansas City, Missouri, and Portland, Oregon. Dr. Hamilton suggested that the Executive Committee call to the attention of the Council the fact that very few hotels in this country can accommodate all the activities of our annual meeting and that the Council should consider the desirability of meeting in a Convention Hall in order not to retreat from our policy of holding our annual sessions in many parts of the country. The invitation to Portland was seriously considered.

(17) The Committee voted to send copies of the minutes of this meeting to all members of the Council so that they will be well prepared for the discussions at the December meeting.

(18) Dr. Hamilton discussed the advisability of publishing a News Bulletin. It was thought that during the first year The Bulletin should be issued once a month. It was roughly estimated that the editorial cost might be kept down to about \$2,500, not including any provision for clerical work. The Committee agreed to recommend to the Council to consider the publication of a monthly News Letter at a subscription of \$2 per year, the first copy being sent gratis. It is hoped that additional data with regard to this new venture of the Association will be available by the time of the Council meeting in December.

(19) Dr. Hamilton pointed out that our Constitution does not provide for the immediate replacement of any of our officers in the event of death or resignation. The Committee discussed this problem and will ask the Council to consider it.

(20) Dr. Bartemeier informed the Committee that the Board of Directors of The Psychiatric Foundation will send a letter and pamphlet to each member of our Association explaining the aims and objectives of The Foundation and asking each member to make some donation, however small, prior to a program of wide-spread publicity. The American Neurological Association has endorsed The Psychiatric Foundation and its members will be contacted in the same way as the members of our own Association. The need for securing the approval of the American Medical Association as quickly as possible was discussed.

(21) Mr. Davies read a request from Dr. Henze of the Sandoz Chemical Works requesting reprints of a paper by Dr. Kozol. This question was referred to the Committee on Ethics for an opinion.

(22) Mr. Davies read a letter from Dean Langmuir regarding the estate of Lester N. Hofheimer, which has set aside the sum of \$24,000 to be paid to the American Psychiatric Association to provide for the award of 12 successive annual prizes of \$2,000 each by the Association, which are

to be known as The Lester N. Hofheimer Prizes. Dr. Strecker moved that this gift be accepted after the President and Secretary have concluded satisfactory negotiations.

(23) Mr. Davies read a letter from Dr. Charles A. Brown of the New York Regional Office of the Veterans Administration regarding audio-visual aids. Dr. Tarumianz and Dr. Burlingame do not think this problem comes within the scope of their respective committees and our Association has no committee at the present time to deal with this subject. The Veterans Administration wishes to have some cooperative relationship which will have the endorsement of the American Psychiatric Association. This problem was discussed and Dr. Hamilton will explore it further.

The meeting was adjourned at 12.45 p.m.

#### FEBRUARY 13, 1947, NEW YORK CITY

Presiding: Dr. Samuel W. Hamilton.

Present: Dr. Leo H. Bartemeier, Dr. Winfred Overholser, Dr. Thomas A. C. Rennie, Dr. Edward A. Strecker, and by invitation, Dr. Frederick W. Parsons and Mr. Austin M. Davies.

(1) The Committee discussed and approved the proposed establishment of the Eastern State Psychiatric Institute in Philadelphia and the creation of a Department of Mental Health for the State of Pennsylvania. The Psychiatric Institute is to consist of 5 units with a bed capacity for 50 patients in each unit, which will be under the direction of the Departments of Psychiatry of 5 Philadelphia medical schools. The program of this Institute will include training of physicians in psychiatry, teaching of undergraduate medical students, and psychiatric treatment of patients.

Dr. Overholser moved that the Secretary be instructed to write to the Governor of Pennsylvania urging, on behalf of the Association, that the establishment of the Eastern State Psychiatric Institute at Philadelphia be expedited. Dr. Rennie seconded the motion, which was passed.

(2) Dr. Hamilton read a letter from Dr. Farrar asking for a decision by the Executive Committee regarding the publication of two committee reports from the Group for the Advancement of Psychiatry. Following a general discussion, Dr. Bartemeier moved that the Executive Committee recommend to the editor of the JOURNAL that these and subsequent reports from the Group for the Advancement of Psychiatry be published in the JOURNAL. The motion was passed, with Dr. Hamilton and Dr. Overholser voting in the negative.

(3) Dr. Parsons, as Chairman of the Committee on Arrangements for the coming meeting of the Association, reported for his Committee which recommends: (A) A cocktail party Monday evening, May 19, for members, (B) The Committee on Arrangements had discussed a dinner meeting for Wednesday evening, May 21, at considerable length, had come to no final conclusions and wished suggestions from the Executive Committee. Dr. Overholser moved that on Wednesday evening, May 21, there be a dinner, followed by the induction of new

Members and Fellows, with music for dancing to follow. Dr. Rennie seconded this motion, which was passed.

Dr. Hamilton reported the names of those on the Committee on Arrangements as follows:

Dr. C. Charles Burlingame, Vice-Chairman and Chairman of the Sub-Committee on Publicity.  
Dr. Clarence O. Cheney, Chairman of the Sub-Committee on Finances.  
Dr. Robert B. McCraw, Chairman of the Sub-Committee on Hotels and Transportation.  
Dr. S. Bernard Wortis, Chairman of the Sub-Committee on Scientific Exhibits.  
Mrs. Robert B. McGraw, Chairman of the Ladies Committee.

(4) Mr. Davies reported that The Lord Baltimore Press finds it necessary to increase the cost of publication of the JOURNAL by 20%. A letter from The Lord Baltimore Press indicates the necessity of a decision within 2 weeks regarding the purchasing of paper for future use. Mr. Davies pointed out that the subscription cost to members of the JOURNAL had not been raised although the cost of printing has been increased 40% within recent years. Mr. Davies discussed the advisability of publishing the JOURNAL on a monthly basis.

Dr. Overholser made a motion that Mr. Davies be authorized to make the necessary arrangements to establish the publication of the JOURNAL on a monthly basis beginning with the July, 1947, issue. This motion was seconded by Dr. Rennie and passed.

Dr. Overholser moved that Mr. Davies be authorized to enter into a contract with The Lord Baltimore Press for the 20% increase in the cost of publication of the JOURNAL. Dr. Rennie seconded the motion, which was passed.

Dr. Overholser moved that the editor of the JOURNAL be authorized to make any changes in the style of the cover of the JOURNAL beginning with the July, 1947, issue. Dr. Rennie seconded the motion, which was passed.

Dr. Bartemeier moved that the subscription rate be increased to ten dollars beginning with the next volume, but for interns and medical students, five dollars per year. Dr. Strecker seconded the motion, which was passed.<sup>1</sup>

(5) Dr. Hamilton read a letter from the American Medical Association regarding its policy about furnishing reprints to industrial concerns.

(6) Following a general discussion, the Secretary was instructed to send the recommendations of the Nominating Committee to the members of the Association by mail.

Mr. Davies was authorized to have 3,000 ballots printed for the election of officers, which will take place on Tuesday, May 20.

On Motion by Dr. Bartemeier, seconded by Dr. Rennie, the Executive Committee voted that the polls be open from 9.00 a.m. to 4.00 p.m. to provide for voting by all the Members and Fellows attend-

ing the meeting. Dr. Hamilton reported that he intended to appoint a number of Tellers to facilitate the casting of ballots at the election of officers during the coming meeting. Dr. Hamilton requested Mr. Davies to inquire regarding the cost of renting a voting machine.

(7) Following some discussion, Dr. Strecker moved that the meeting dates for the 1948 meeting be June 13 to June 18, inclusive. This motion was seconded by Dr. Bartemeier, and was passed.

(8) Dr. Hamilton reported that he had appointed Dr. George K. Pratt and Dr. LeRoy M. A. Maeder to the task of publishing the Newsbulletin, and he read a letter from Dr. Pratt regarding his activities in this connection.

There was a general discussion regarding the Newsbulletin, and Dr. Hamilton instructed the Secretary to write to the affiliate societies asking them to designate correspondents for the Newsbulletin.

It was decided that there should be a monthly issue of the Newsbulletin for at least the first year and that it should contain up-to-date news regarding the membership of our Association. It was hoped that the first issue might appear before the time of the coming annual meeting. The Committee recommended that the Bulletin be printed and distributed by The Lord Baltimore Press. It was thought that the name of this bulletin would be "American Psychiatric Association Newsbulletin."

(9) Dr. Hamilton spoke of the need of developing a Committee on Finances and of the advisability of having the auditors meet together prior to the coming annual meeting, to decide upon a fiscal policy for the Association.

(10) Dr. Hamilton reported that the Sub-Committee on Psychiatry and Industry of the Committee on Public Education has been established as a separate committee. Dr. Leonard E. Himler has accepted the Chairmanship of this committee.

Dr. Thomas M. French is the new Chairman of the Committee on Research.

Dr. Hamilton also read a letter from Dr. William Leavitt, who represented the Association at a meeting of the Social Hygiene Association.

(11) Dr. Bartemeier read a letter from Dr. G. Kirby Collier expressing the hope that some arrangement might be made whereby the members of the American League Against Epilepsy might attend certain sessions of the scientific program during the coming meeting of the Association without the necessity of paying a registration fee. It was concluded that Dr. Collier's request would create future difficulties by establishing a precedent for the admission of other groups without the payment of the customary registration fee.

APRIL 22, 1947, WASHINGTON, D. C.

Presiding: Dr. Samuel W. Hamilton.

Present: Dr. Leo H. Bartemeier, Dr. Winfred Overholser, Dr. Thomas A. Rennie, and Mr. Austin M. Davies, by invitation.

Absent: Dr. Edward A. Strecker.

Dr. Hamilton called the meeting to order at 8.00 p.m.

<sup>1</sup> It was later decided that the rate for medical students and interns should remain at \$3.00.

The question of the meeting on Thursday morning, May 22, during the annual meeting, was first discussed. It was moved by Dr. Bartemeier and seconded by Dr. Rennie that the Executive Committee recommend to the Council that in this meeting the membership should act as a Committee of the Whole. The motion was passed.

It was moved by Dr. Overholser and seconded by Dr. Bartemeier that Brigadier Rees be invited to make an address following the banquet Wednesday evening, May 21. The motion was passed.

It was moved by Dr. Rennie and seconded by Dr. Bartemeier that there be a meeting of the Council beginning Saturday, May 17, at 2.00 p.m. This motion was passed.

Dr. Hamilton read a report by Dr. George S. Stevenson regarding the meeting of the United Nations Economic and Social Council.

Dr. Rennie moved, and Dr. Overholser seconded, that a Budget Committee be established, to be composed of the Treasurer of the Association and a few of the former Secretaries. This motion was passed.

It was moved, seconded, and passed, that the salaries of two of the office staff be increased, effective

May 1, 1947, Miss Ryder's salary by \$200 per year and Miss Phelps', by \$500 per year.

Dr. Bartemeier recommended that \$12,000 now in the Treasury be invested in U. S. Government bonds to be held by the Association as a Treasury reserve. There was general agreement to this recommendation.

After some discussion, it was requested that the Council be asked to reconsider the advisability of publishing the Newsbulletin.

It was pointed out that the JOURNAL will be operating at an annual deficit of \$5,300. It was moved, seconded, and passed, that one dollar be appropriated to the JOURNAL from the dues of each member of the Association.

Mr. Davies reported on the number of meetings held by each committee during the past fiscal year and the amount each committee had spent in connection with these meetings. These data will be published in the JOURNAL.

The meeting was adjourned at 10.30 p.m.

LEO H. BARTEMEIER, M. D.,  
*Secretary.*

## CORRESPONDENCE

### NEEDS OF THE PUBLIC LIBRARY OF CORFU

A letter received from Mr. Michael Mantoudis, Director of Letters, Theatres, and Cinemas in the Ministry of National Education of the Kingdom of Greece encloses the following letter from the Director of the Public Library of Corfu. Mr. Mantoudis points out that "the historic town of Corfu has always been a great center of Hellenism and the English language is very widely used there."

Contributions that readers of the JOURNAL may wish to make to the Library of Corfu, either of copies of their own publications or otherwise, will be most welcome.

*Editor, AMERICAN JOURNAL OF PSYCHIATRY:*

SIR: Owing to the air-raid of the town of Corfu, on Sept. 14, 1943, the Public Library of Corfu has been destroyed. The Library building, together with the various installations and over 70,000 books, most of which were very rare and extremely difficult to replace, was burned and completely destroyed.

The reconstruction and reestablishment of this Library began immediately after the liberation of the Country, chiefly by contributions from Greek and some foreign scientific institutions as well as with the assistance of the Greek Ministry of National Education.

Believing that you are interested in helping scientific institutions of the Allied Countries which have suffered so much the brutality of the enemy attacks, we would ask you to kindly help us in our effort to reorganise this Library, by sending us your publications for it.

Your contribution for the rapid reconstruction of this Library, which is the oldest historical Library of Corfu, will support general Greek culture and will be greatly appreciated.

CONST. SOLDATOS,  
Director of the Public Library of Corfu.

### THE HEIRENS REPORT

*Editor, AMERICAN JOURNAL OF PSYCHIATRY:*

SIR: In the article appearing in the AMERICAN JOURNAL OF PSYCHIATRY, 104: 113, 1947, entitled, "A Study of William Heirens" by Foster Kennedy, Harry R. Hoff-

man, William H. Haines, there appears on page 113 an inaccurate statement. This reads as follows:

"Another interview was arranged and he was examined the same night by Drs. Roy R. Grinker and William H. Haines at which time a conclusion was reached that he was malingering."

This statement is inaccurate because it only corresponds to the opinion at that time of Dr. William Haines. I myself stated that the patient was to some extent consciously malingering but that he was psychotic and that I would so testify if called into court. The data available for study and the report of the prison psychiatrist subsequent to Heirens' conviction all increase my conviction that he was, and still is, psychotic.

ROY R. GRINKER, M. D.

### FINLAND NEEDS SCIENTIFIC BOOKS

*Editor, AMERICAN JOURNAL OF PSYCHIATRY:*

SIR: Finland has an excellent and keenly scientific minded Technical Institute, Teknillinen Korkeakoulu. During the war its library was bombed and totally destroyed.

On my recent trip to Finland for the American Friends Service Committee, I discussed the situation with Dr. Martti Levon, Director of the Institute. He said he would welcome gifts of scientific and technical books and periodicals from America to take the place of those destroyed. In the remarkable efforts for recovery that the Finns are making, the lack of technical library facilities is a very serious handicap. It would be a practical act of friendship to a nation that holds America in high regard if Americans should contribute good technical books and periodicals to this library.

Any such gifts should be marked for the Institute of Technology, Helsinki, and sent to the Legation of Finland, 2144 Wyoming Ave., N. W., Washington, D. C. Dr. K. T.

Jutila, the Finnish Minister, will arrange for their being shipped to Finland.

ARTHUR E. MORGAN,  
Member, American Friends  
Service Committee, Yellow  
Springs, Ohio.

#### COLOR VISION IN PSYCHOTIC PATIENTS

*Editor, AMERICAN JOURNAL OF PSYCHIATRY:*

SIR: A report from this laboratory entitled "Incidence of Defective Color Vision among Psychotic Patients" will soon appear in the *Archives of Ophthalmology*. Our interest in this subject was aroused by the claim of Kaplan and Lynch (Color Blindness in the Psychoses, *Am. J. Psychiatry*, 101:675 1945) that psychotic patients, both male and female, show a high incidence of color blindness. This conclusion by Kaplan and Lynch is at variance with that of Millard and Shakow (A Note on Color Blindness in Some

Psychotic Groups, *J. Social Psychology*, 6: 535, 1935) who found the incidence of color blindness in a psychotic population not to be significantly different from that in a normal population.

Our study confirms that of Millard and Shakow. In our opinion the contrary finding by Kaplan and Lynch was in major part due (a) to poor selection of the color blindness test used by them; (b) to ignorance of the many random errors which are made on this test by nonpsychotic subjects whose color vision is normal by other accepted criteria; and (c) to inadequate criteria on which to diagnose the presence of defective color vision. Lack of control of conditions under which the test was administered may also have been a contributing factor.

LE GRAND H. HARDY, M. D.,  
Knapp Memorial Laboratories,  
College of Physicians and Sur-  
geons of Columbia University.

## COMMENT

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CLARENCE O. CHENEY

The professional stature of Dr. Cheney is indicated by the training experience he had acquired, the succession of important posts to which he was called, and the confidence reposed by his colleagues in his executive and scientific judgment.

After five years' grounding in pathology at Manhattan State Hospital, he was assistant director of the New York State Psychiatric Institute, five years; assistant superintendent of the Utica State Hospital, four years; superintendent of the Hudson River State Hospital, five years; director of the New York State Psychiatric Institute and Hospital, five years; and medical director of the New York Hospital, Westchester Division at White Plains, ten years. He served as consultant to many other hospitals and agencies, including the Veterans Administration and the National Committee for Mental Hygiene. He was on the teaching staff of four medical schools, including the professorship of psychiatry at Columbia University and the professorship of clinical psychiatry at Cornell Medical School. He had been honored by the award of the Columbia University Medal and the Congressional Selective Service Medal. In 1935-1936 he was president of the American Psychiatric Association.

But in this place it is especially as associate on the editorial board of the AMERICAN

JOURNAL OF PSYCHIATRY that we speak of him. Dr. Cheney was a senior editor of the board of editors, having been invited to join the staff in 1931. During all these years, and despite the many demands upon his time, not only has he assisted materially with the actual editorial work but he has always been ready to give careful consideration to questions of policy and procedure that arise from time to time and to offer his wise counsel. We have never been wrong in relying upon his judgment.

The casual reader may not be conscious of the multifarious details and often the nice issues involved in the production of a scientific periodical publication. It is by no means a one-man job. It can be carried forward satisfactorily only through the staunch collaboration of such men as Dr. Cheney. And such editorial associates become more valuable as their years on the board increase. This is an added reason why the passing of Dr. Cheney entails a loss that is particularly heavy, a loss keenly felt by his immediate colleagues; but also, although a little less directly, by all the readers of the JOURNAL. The JOURNAL salutes the memory of Dr. Cheney and deeply regrets that he can no longer be called upon for his friendly help.

C. B. F.

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## NOTICE

Dr. Douglas Thom, chairman of the Nominating Committee of the American Psychiatric Association, reports that, as of December 1, approximately 40 percent of the Members and Fellows of the Association have returned their ballot suggestions. All members were mailed ballots on October 24, and it is hoped that many more ballots will be sent in. If you have not done so, please DO IT NOW.



## NEWS AND NOTES

**INTERNATIONAL CONGRESS ON MENTAL HEALTH.** Preparations for the International Congress on Mental Health to be held in London, England, August 16-21, 1948, are rapidly being developed. As has been previously intimated, this will be a multi professional assembly, and it is expected that a great many countries will be represented. It is the privilege of all psychiatrists and other interested persons to have some part in the planning of the Conference through the formation of local preparatory commissions for discussion of such aspects of mental health as may most interest them. The main presentations at the Conference will originate from these commissions. So far as the American Psychiatric Association is concerned, each member who is so inclined is requested to call together a group of from 3 to 15 persons, so that several fields in the social sciences will be represented. It is also suggested that each mental hygiene hospital medical staff, with its associated psychologists and social workers, might become a preparatory commission. Preparatory commissions are requested to hold meetings at least once a month. Each commission is asked to submit a list of the names and professions of its members and the name and address of the permanent chairman, along with a statement of the problem on which the group is working. Four copies of list and statement should be prepared, one to be sent to Nina Ridenour, Executive Officer, International Committee for Mental Hygiene, 1790 Broadway, New York 19, N. Y.; one to the Programme Secretary, International Congress on Mental Health, 19 Manchester Street, London W. 1, England; one to the regional chairman; and one to the area coordinator. For the United States, names of regional chairmen will be found in a bulletin entitled "U. S. Participation in the International Congress on Mental Health." Names of area coordinators can be obtained from the Regional Chairmen. Anyone who is interested in forming a Commission should have a copy of the Bulletin. Copies have already been sent to all members of the American Psychiatric Association,

and additional copies are available from the office of the International Committee. Commissions will be asked to send in a preliminary report in January and a further report at the end of March.

The reports of the preparatory Commissions emanating from all the countries concerned in the Congress are to be studied by a preliminary conference to be held in London for 3 weeks during July, 1948, at which time the main reports, indicating the areas of agreement and disagreement and problems for future study, will be drafted for presentation to the International Congress in August.

The main theme of the Congress is "Mental Health and World Citizenship." Preparatory commissions are asked to keep this general theme in mind in deciding on the particular phase they may discuss, and it has been suggested that the American contribution focus on problems of the mental health of children and how they may be influenced by war and international tensions. It is hoped constructive policies will emerge from the International Congress. Each preparatory commission, however, should consider itself entirely free to select any topic which may be even remotely or indirectly related to the main theme of the Congress.

It is proposed that the International Committee for Mental Hygiene will be replaced by a new organization to be set up, tentatively to be known as the World Federation for Mental Health. It is expected that this body will be truly international and will contain members representing all the social sciences, and that this will be the international body for dealing with mental health problems in relationship to the World Health Organization and UNESCO.

Dr. Frank Fremont-Smith, medical director of the Josiah Macy, Jr., Foundation is vice-president for the United States of the Interim Governing Board, and has recently returned from England where he has conferred with the president, Dr. J. R. Rees, and others who are undertaking the actual organization of the Congress.

**DIAGNOSTIC CENTER TO BE ESTABLISHED IN NEW JERSEY.**—New Jersey is planning to establish a Diagnostic Center, an institution for the screening of various types of cases prior to institutionalization or other disposition. One of the largest groups of cases will be those referred by the courts for determination of mental status and recommendations prior to sentence. Another group will be cases referred by the mental hygiene clinics for more intensive study than is possible in the community. Other cases may be referred by practicing physicians, hospitals, etc. The institution will be ready to function on an outpatient status sometime during the latter part of 1948. It is hoped that an inpatient service of 150-200 beds will be functioning during the course of 1949.

Facilities will include all forms of psychiatric and psychological examinations and testing. There will also be electroencephalographic and pneumoencephalographic examinations and other forms of specialized studies. Research and individual investigation will be encouraged. The staff will include qualified psychiatric social workers, psychologists, and psychiatrists, all working under a Director.

Candidates for the position of Director are now being considered by the Commissioner of the Department of Institutions and Agencies. A qualified psychiatrist with administrative ability and an interest in forensic psychiatry is desired for the position. The salary will depend on experience and qualifications but will probably be between \$7,500 and \$10,000. Any interested persons may write to Dr. Henry A. Cotten, Jr., Deputy Commissioner, Department of Institutions and Agencies, State of New Jersey, Trenton 7.

**JACKSONVILLE STATE HOSPITAL OBSERVES CENTENNIAL.**—Observance by the Department of Public Welfare of the 100th anniversary of the establishment of Illinois' first institution for the mentally ill was held in Jacksonville, Illinois, on July 27, 1947, in conjunction with a meeting of the Third Division of the American Legion.

The celebration included a banquet for members of the Third Division, attended by

nearly 500 guests and held in the dining room of the veterans' unit of the hospital. Dr. Winfred Overholser, President of The American Psychiatric Association and superintendent of St. Elizabeths Hospital, Washington, D. C., gave the principal address, entitled "Jacksonville, 1847—Psychiatry Then and Now," in which he paid tribute to Illinois for its program in the care and treatment of the mentally ill. The history of the hospital was described by Governor Dwight H. Green in an address on "Illinois—the Humanitarian," delivered by Richard Yates Rowe, Treasurer of the state of Illinois.

On the second day of the festivities, a colorful parade of the Third Division, other veterans' organizations, and representatives of the Jacksonville Chamber of Commerce passed from the public square to the hospital grounds, where a program was presented to the guests, who included members of medical societies, nurses' associations, patriotic societies, and civilians. The group was welcomed by Dr. James L. Smith, superintendent of the hospital. Dr. Harry R. Hoffman, state alienist, was chairman of the program committee.

**DR. BURLINGAME HONORED BY FRENCH GOVERNMENT.**—At a dinner at the Union Club in New York City, Sept. 10, 1947, in honor of Dr. Justin Godart as representative of the French Government, Dr. C. Charles Burlingame was formally given the decoration of an officer of the French Legion of Honor in recognition of his services to international health and welfare. This decoration represents a promotion, Dr. Burlingame having been for several years a Knight of the French Legion of Honor. He has also been the recipient of other special honors from France and other countries.

**THIRD CONGRESS ON GENERAL SEMANTICS.**—The Third Congress on General Semantics will be held in 1948 under the auspices of the University of Denver. Tentative dates are August 13, 14, and 15. Workers in general semantics and allied fields are invited to contribute papers and progress reports on applications of the discipline. A preliminary announcement and information

about attendance at the Congress will be available early in 1948 from Dr. Elwood Murray, Chairman of the Congress Committee, University of Denver, Denver, Colorado.

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**DR. GLUECK HEADS NEW CLINIC.**—Dr. Bernard Glueck has temporarily taken over the directorship of a newly established psychiatric consultation center in Glens Falls, N. Y. This organization is sponsored by the Mental Hygiene Association and the Community Chest of Glens Falls and is located at 360 Glen St. The Medical Society of Glens Falls and other social agencies are interested in the project and lending their co-operation.

Dr. Glueck was enabled to undertake this new work by reason of the fact that Dr. Bernard Glueck, Jr., on his return from the Army took over the management of Stony Lodge Sanitarium, which Dr. Glueck, Sr., had directed for many years.

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**RESIDENCY TRAINING IN RICHMOND, VIRGINIA, VA HOSPITAL.**—The Council on Medical Education and Hospitals of the American Medical Association has given its temporary approval to the residency training in psychiatry offered by the VA Hospital at Richmond, Virginia. The training program is of 3 years' duration. All phases of psychoses and psychoneuroses and a great variety of neurological and neurosurgical cases can be found in this 1,000-bed hospital. The Neuropsychiatric Service, which is headed by Dr. Benedict Nagler, has still some vacancies for residents. Interested physicians should apply to the Subcommittee on Psychiatry, Dr. R. Finley Gayle, Jr., Chairman, Medical College of Virginia, Richmond, Virginia.

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**MICHIGAN SOCIETY OF NEUROLOGY AND PSYCHIATRY.**—The Society's first meeting of the year, September 11, 1947, was held jointly with the Michigan Society for Mental Hygiene and the Cornelian Corner, with Dr. J. Clark Moloney presiding. Dr. David Levy, of New York, presented a paper entitled "Maternal Overprotection." The formal discussant was Dr. Harry A. August.

The second meeting of the year was held at the Traverse City State Hospital, October 30, 1947. At this meeting also, a scientific program was presented, with several contributions.

Officers of the Society are Dr. J. Clark Moloney, President; Dr. Ralph M. Patterson, President-Elect; Dr. Ivan C. Berlien, Secretary-Treasurer; and Dr. Roscoe W. Cavell, Dr. Thomas J. Heldt, and Dr. Louis S. Lipschutz, Councilors.

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**WASHINGTON SOCIETY FOR THE ADVANCEMENT OF PSYCHOTHERAPY.**—After a number of preliminary meetings, dating back to May 15, 1946, the first formal meeting of the Washington Society for the Advancement of Psychotherapy (no connection with any other organization) took place on January 16, 1947. The object of the society is to advance knowledge in the field of psychotherapy. It proposes to do this by joining together all the workers in psychotherapy, not limiting its scope to any one school of therapy, and by discussions, lectures, institutes, publications, and other forms of dissemination of knowledge and experience.

Membership in the organization is at present limited mainly to three groups of physicians: (1) active membership is limited to physicians who are psychiatrists, have had a minimum of 10 years of actual experience in psychotherapy, have been recognized as having achieved an unquestioned reputation in psychotherapy, and who, at the time of the application for and during their membership, devote their entire time to the clinical practice of psychotherapy; and (2) associate membership limited to (a) psychiatrists who are in various degrees of training, (b) physicians in general practice.

On June 6, 1947, the Society was incorporated under the laws of the District of Columbia. The officers of the Society are as follows: President, Louis S. London, M. D.; Vice President, Leopold E. Wexberg, M. D.; Executive Director and Secretary, Benjamin Karpman, M. D.; Treasurer, Philip Litvin, M. D. At the same time the Washington Institute for Psychotherapy was organized and incorporated.

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**CENTRAL NEUROPSYCHIATRIC ASSOCIATION MEETING.**—The twenty-third annual

convention of the Central Neuropsychiatric Association was held in Galveston, Texas, October 17-18, 1947. This organization was formed in 1922 with the idea of affording better mutual acquaintanceship among the neurologists and psychiatrists of the central and western states and provinces. At each annual meeting, the members in the convention city demonstrate their clinical and research activities and facilities.

Dr. Titus H. Harris arranged the all-Texas program, including contributors from Austin, Dallas, Fort Worth, Houston, San Antonio, and Waco.

Officers for the coming year are as follows: President, Dr. William C. Menninger; Vice-President, Dr. Walter L. Bruetsch; Secretary-Treasurer, Dr. Lee M. Eaton; and Counselor, Dr. Clarence E. Van Epps.

GROUP THERAPY SESSIONS IN NEW YORK.—Announcement has been received of two series of group therapy meetings which will be held under the direction of Dr. George Lawton, attending psychologist, Psychiatry Department, Vanderbilt Clinic, New York. The series are designed for men and women from 35 to 60 years of age and for those over 60. Difficulties of adjustment on the part of each participant will be considered by all. The groups will meet twice weekly for five weeks; membership in each will not exceed ten. The meetings will last about 75 minutes and will take place in Dr. Lawton's office, 41 West 82d St., beginning November 18. Each series will be repeated in March and in May, 1948.

MOOSEHAVEN: CITY FOR THE AGED.—The Loyal Order of Moose, which established the well-known Mooseheart Laboratory for Child Research 17 years ago, now extends its support of research to the old age group. The Fraternity announces the appointment of a National Advisory Council for Research in Gerontology for the Fraternity's city for the aged at Moosehaven, near Jacksonville, Florida. It is hoped to make Moosehaven a model for the country in the care of the aged, and also to establish there a department of research available to all. Interested scientists should address inquiries to Dr. Martin L. Reymert, Mooseheart, Illinois.

NEW VOLUME ON OLD QUILTS BY DR. DUNTON.—Contingent to his pioneer work in occupational therapy and as a hobby of long standing, Dr. William Rush Dunton, Jr., has collected a vast deal of information concerning old quilts. Much of this information covering the past 100 years is presented in a new, privately printed volume of nearly 300 pages and profusely illustrated. Information concerning this new work can be obtained by writing directly to Dr. Dunton, 33 No. Symington Road, Catonsville, Md.

CORRECTION TO CERTIFICATIONS BY AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY.—The name of Dr. Henry S. Colony, Lt. Comdr. (MC), USN, was omitted from the list of those certified at Philadelphia, May 15-17, 1947.

## BOOK REVIEWS

INTRODUCTION TO PSYCHOBIOLOGY AND PSYCHIATRY.  
(Second Edition, 1946). By *Esther Loring Richards, St.D.* St. Louis: C. V. Mosby Company, 1946.

It is stated that the book is for students of nursing and medicine, but it is obviously designed primarily as a text book in psychiatry for nurses. The whole field of psychiatry is surveyed. The book is divided into three parts: Part One—Fundamentals of Human Behavior Functioning; Part Two—Fundamentals of Psychiatric Work; Part Three—Fundamentals of Psychiatric Illnesses and General Treatment Procedures, and finally an appendix. The concepts that are formulated are those of Adolf Meyer, and the author makes it quite clear that this is her approach to the subject. As such it can be recommended as a simple, clearly written exposition of Adolf Meyer's views. The level at which the book is written is obviously for those without any special information or training in the field. The material presented gives some of the fundamental concepts of psychiatry based on the psychobiological viewpoint. The chapter on alcoholism is contributed by Dr. Robert Seliger and is in accordance with the generally accepted views on this subject. There are a few minor errors which one is surprised to see get by in a second edition of the book. The Dark Ages are stated as starting in the fourth century B. C. It is stated, "The intelligence test was given to us by Binet and Simon in 1911," and that insulin treatment "found vogue in this country in our State hospitals in the early 1930's." In discussing electric shock it is stated "since this treatment can be done in a few minutes in contrast to insulin and metrazol." These are examples of minor errors which do not seriously detract from the over-all presentation, which is on the whole an excellent one. The book can be recommended for its purpose, which is primarily as a text book in psychiatry for nurses.

KARL M. BOWMAN,  
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RORSCHACH PSYCHOLOGY. By *Paul Maslow.*  
(Brooklyn: Brooklyn College Press, 1945  
(multigraphed).)

In this manuscript, the author presents some philosophical viewpoints, derived by him out of Rorschach test language. How tenuous is his foundation for the theorizing, he himself tells us (p. 110): "Incidentally, the additions made to the Rorschach technique in this book have not been validated in an approved scientific fashion. Theories arising from and checked against a few individuals (biased and poor observers of themselves) and the speculative correlations between the specific aspects of the personality and the Rorschach symbols rather than the customary experimentation have

been our method. There has been a dependence upon the logical consequences of our basic assumption which enabled us to draw what we considered to be the most probable conclusions. Our belief in the validity of these conclusions is strong because the basic theory consists of a number of independent strands that came together from various directions to support our whole concept of personality. But though our basic theory has not been proven right, neither has it been proven wrong . . . in the meantime, the only real 'proof' we have to offer is our own satisfaction with the results to date."

A further index to his approach is seen in his bibliography. Out of 104 titles, this reviewer identifies 12 as Rorschach papers; 3 as larger volumes that include Rorschach test reports. The other references are distributed within (a) the general literature of psychology and psychiatry; and (b) heavy concentration on writings represented by Whitehead, Spinoza, Reid, Collingwood, Cohen, Plato, and other thinkers in this range.

The level of the publication is exemplified in such obfuscations as (p. 12): "PM thought (opinion) is based upon movements which the individual directs as he pleases as compared to AM thought (understanding) which is controlled by the animal seen in the response and EM thought (reason) which is controlled by the human seen." Another gem (p. 13): "The differentiation of movements into extensor living, inhibited and flexor can also be applied to personal movements. There are EPM, LPM, IPM, and FPM just as there are EM, LM, IM, FM and EAM, LAM, IAM, FAM."

The publication is full of unwarranted statements without any basis in educed evidence. Thus, (p. 83): "Turning the cards (@, V, >, <, ^,) indicates a desire and an initiative to look at all sides of a problem." Again, (p. 90): "Those who see emblems on the cards (flags, insignias, signs symbolizing power, prestige, strength, position) look for and fix upon accepted standards in real life as a substitute for personal probing thought and a safe guide for conduct through society."

There are, to be sure, many accurate statements but any Rorschach test student will recognize them as old and common stock of Rorschach test information. What the author thinks he is adding by repeating them, this reviewer is hard put to it to say. In fact, he cannot say why this manuscript has been published at all except as meeting an inner urge for publication.

It all brings to mind a caricature by that prince of caricaturists, Max Beerbohm. In it George Bernard Shaw is represented as attempting to sell some old clothes to the literary critic, Georg Brandes, who is represented as a tailor. The dialogue:

GEORG BRANDES (*'Chand d'Idées'*): "What'll you take for the lot?"

GEORGE BERNARD SHAW: "Immortality."

GEORG BRANDES: "Come, I've handled these

goods before! Coat, Mr. Schopenhauer's; waistcoat, Mr. Ibsen's; Mr. Nietzsche's trousers—"

GEORGE BERNARD SHAW: "Ah, but look at the patches!"

S. J. BECK, PH.D.,  
Chicago, Illinois.

PRINCIPLES OF DYNAMIC PSYCHIATRY. By Jules H. Masserman, M.D. (Philadelphia: W. B. Saunders Co., 1946.)

This is the first book of a very ambitious series by which an excellent research worker and writer attempts to formulate what he calls "dynamic psychiatry," which appears to be, as one reads the book, a fusion of the points of view of behavioristic, psychoanalytic, and psychobiologic theories, each of which is very briefly stated and criticized in a total of about 10 pages of the book (pp. 89-98). Such theories as those of Jung, Adler, and other writers are dismissed in about a line and a half. Despite its declared theory of approach, the book struggles between what is essentially a Pavlovian experimental approach and psychoanalytic formulations.

Drugs are hardly considered at all except in relationship to some experiments by the author on alcohol, in which he proves that neurotic behavior is favorably influenced by alcohol. Electric shock is mentioned in one or two places as footnotes to something else and, so far as I can see, prefrontal lobotomy does not enter the picture at all.

Many of the clinical examples of this book consist of correlations between simple frustration experiments on animals and the complex human states which are analyzed in the light of these frustration experiments, as if the comparison had adequacy and relevancy, which, in my opinion, they do not since the hugely complicated social scheme of man and the simple setup of the experiments can only be vaguely likened to one another.

The author establishes 4 principles (p.102) which govern the *biodynamic* theory of behavior, which is his offspring and which he now presents to the world. These are:

"1. *Principle of Motivation*.—Behavior is basically actuated by the physiologic needs of the organism and is directed toward the satisfaction of those needs.

"2. *Principle of Experimental Interpretation and Adaptation*.—Behavior is contingent upon, and adaptive to, the organism's *interpretations* of its total milieu, as based on its capacities and previous experiences.

"3. *Principle of Deviation and Substitution*.—Behavior patterns become deviated and fragmented under stress, and when further frustrated, tend toward substitutive satisfactions.

"4. *Principle of Conflict*.—When in a given milieu two or more motivations come into conflict in the sense that their accustomed consummatory patterns become incompatible, kinetic tension (anxiety) mounts and behavior becomes hesitant, vacillating, erratic, and poorly adaptive (neurotic) or excessively substitutive, symbolic, and regressive (psychotic)."

These 4 principles are not novel, although they are cogently stated and elaborated, and they by no means exhaust the complexity of human life. They are developed in the book with such other matters as come into consideration. Case histories are given with corollaries. Thus, Principle 3 has five corollaries, and the other principles have relevant corollaries of their own.

When the author takes up the criticisms of the biodynamic theory of behavior, he discusses them under the head of *shibboleths*. Apparently anybody who criticizes his work is given to shibboleths, which is not the scientific way to meet objections to the principles which make up his "biodynamics."

The last part of the book is given up to an illustrative analysis of a neurotic personality. Masserman may give homage to Pavlov by his experiments, but in general, although he declares his differences from Freud, he uses his technique, and this illustrative analysis does not differ very greatly from that which has been used from the early days of Freud.

It is a very good thing that at the end of the book Masserman has a glossary of psychiatric terms. The language in which this book is couched is quite formidable, as for example, "From an economic standpoint, therefore, the patient's various symptoms—vomiting, diarrhea and urinary urgency—served as channels for an autoplasmic discharge through the eliminative functions of various guilt-ridden aggressive or erotic impulses which the patient, because of covert fear, was inhibited from expressing in alloplastic social behavior" (p. 198). This is a sample of the author's style.

However, we are promised that this is only the beginning of a new point of view called biodynamics; that the next volume will initiate us into the mysteries of compulsive, schizophrenic, and manic-depressive behavior; and that there is being born via this volume a new approach to the problems of psychiatry, which will unify all behavior from the amoeba to man and include the points of view of all the sciences, as well as all the departments of medicine, in one grand explanation and technique. Dr. Masserman is a very learned man, a fine experimentalist, and all things are possible to such a combination of qualities plus great energy and industry. Somewhat skeptical as I am, I wish him well in this, an ambitious and brilliant enterprise.

ABRAHAM MYERSON, M.D.,  
Boston.

THE 1946 YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND NEUROSURGERY: Neurology, edited by Hans H. Reese, M.D., and Mabel G. Masten, M.D. Psychiatry, edited by Nolan D. C. Lewis, M.D. Neurosurgery, edited by Percival Bailey, M.D. (Chicago: The Year Book Publishers, 1947).

The scope of the Year Book has been altered again this year and includes neurosurgery in place of endocrinology. The latter, which had been included with neurology and psychiatry since 1934, has been combined with contributions on metabo-

lism and nutrition (removed from general medicine); and these three now constitute a new volume in the Year Book series.

The section on neurology reviews new studies on cerebral localization and fibre tracts, and indicates also the gaps in our knowledge of structural relations. Literature dealing with the anatomy, physiology, and pathology of the central nervous system is summarized in the first few pages. Next follows a subdivision on the convulsive disorders. Each of these two subdivisions is preceded by a brief general statement by the editors, a sort of "argument" which helpfully sums up the main issues. Disorders of the central nervous system, together with diagnostic procedures, arranged under the same subheadings as last year, make up the major portion of this section of the Year Book.

In their introduction the editors remark incidentally (with a wink at the psychiatrists) that "the neurologist's point of view of disease is not clothed in involved or circuitous theorizing with jargon description."

Nolan Lewis' definition of psychiatry as "the study of human adaptation" indicates strikingly the long way traveled and the changes in emphasis and viewpoint since "textbooks of mental diseases" were written. But even until now, as Lewis points out, there has been a comparative neglect of psychiatry in medical education, as became evident during the recent war by the failure of many medical officers to deal suitably with the problems of mental health arising in the armed forces.

The grouping of topics in the psychiatric section suggests the obsolescence of traditional nosological concepts. The organic, toxic, and psychosomatic disorders are separately headlined and quite comprehensively covered. There is also a section for general topics and one on child psychiatry. The remaining psychiatric conditions are treated under the heading, "schizophrenic reactions and other psychoses."

The editor stresses the failure of any and all methods hitherto available for dealing satisfactorily with the problem of crime. "Society should insist on the establishment of research institutes for the investigation of this whole situation, which constitutes a danger to normal societal integration as well as a financial drain on the taxpayers."

The newer therapies widely used in recent years, and also the still lively field of military psychiatry, are fairly represented in the reviews provided.

In his introduction to the new section on neurosurgery, which appears for the first time as a separate section in the Year Book series, Percival Bailey sums up concisely recent advances in this field, particularly the newer methods of treatment coming into use during and since the war. One hundred sixty-five of the 700 pages of text are devoted to neurosurgery, which, as Bailey remarks, "threatens to engulf and extinguish neurology to the detriment of both."

The editor of this section appears to be not altogether comfortable in the company in which he finds himself. With regard to psychiatry, his next-door neighbor in the present Year Book, he has

expressed himself rather strongly in another connection (J. Assoc. Am. Med. Colleges, Sept., 1946), where he makes the arresting statement: "Neurology has everything to gain by strengthening her ties with neurosurgery, since both rest on the same intellectual discipline, and by divorcing herself from psychiatry, at least for an indefinite future period, since psychiatry has moved into pathways alien to her genius."

Psychiatry surely needs the closest possible affiliation with neurology and neurosurgery as well as with other branches of medicine, and cannot thrive otherwise. Whatever his specific criticism may be, the opinion quoted above, from a scientist of such distinction as Dr. Bailey, deserves serious consideration.

C. B. F.

PSYCHIATRIC INTERVIEWS WITH CHILDREN. By Helen Leland Witmer. (New York: The Commonwealth Fund, 1946.)

*Psychiatric Interviews with Children*, edited by Miss Witmer at the request of the Commonwealth Fund, is intended for students and practitioners in child psychiatry. It presents detailed records of 10 children treated in child guidance clinics by 8 experienced therapists representing various current schools of dynamic psychiatry. The editor's aim is to demonstrate the methods now in use for the direct treatment of children with emotional difficulties. She also wishes to "analyze the reasoning underlying the therapists' activities in much more detail than has been usual in the literature." In both of these aims she succeeds remarkably well.

The book is divided into two sections. The first consists of a brief history of the development of child guidance clinics, a description of the "teamwork" principle of these clinics, and a discussion of the manner in which therapists utilize the physician-patient relationship for the benefit of the child.

Part Two contains 10 detailed case presentations. The first 3 are the recorded interviews of nonneurotic children; the next 4 are those of children with neurotic symptoms; and the last 3 are of seriously neurotic children. The therapist in each presentation first gives an introductory discussion of the dynamics involved in the child's disorder. He then reports on the activities and conversation of each interview, using elaborate concurrent footnotes for a discussion of the reasoning behind his efforts. The reader thus has a picture of how the therapist interprets and how he reacts to the patient's activities at each stage of therapy. Social Service summaries, furnishing information as to the parents' concomitant progress with the social worker, are inserted frequently among the patient's interviews. Each child presented had at least one parent with whom he felt relatively secure and who also came to the clinic for help.

Because this volume contains so many footnotes it is slow reading. The effectiveness of the therapy varies, as some of the therapists are rather obviously more skilled than others. The divergent points of view regarding behavior motivations pre-

sented here make the responses of some therapists seem more reasonable than others, depending on the reader's viewpoint. By any standard, Dr. Frederick Allen's handling of Betty Ann Meyer seemed to the reviewer a particularly vivid example of sensitive, understanding therapy.

This work has much to contribute to anyone interested in the direct treatment of emotionally disturbed children. The authors are to be complimented on their cooperation in subjecting the details of their techniques to the scrutiny of fellow workers. Beginning therapists will find it helpful in learning how experienced persons in the field react to the minute-by-minute problems of the therapeutic situation.

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Baltimore 5, Md.

TEXTBOOK OF ABNORMAL PSYCHOLOGY. By C. Landis and M. M. Bolles. (New York: The Macmillan Company, 1946.)

This textbook has been designed primarily for the use of undergraduate students majoring in psychology, education, sociology, biology, and theology. It will also be of value as an introduction to abnormal psychology for those under training in such professions as teaching, social work, law, and medicine.

The manner in which the material is organized and presented clearly reflects the competence and wide clinical experience of the authors. The senior author is professor of psychology at Columbia University and principal research psychologist at the New York Psychiatric Institute and Hospital. The collaborating author is a former research assistant at the Psychiatric Institute. Both are well known for their original contributions to the research literature in abnormal psychology.

Abnormal psychology is surveyed and the present status of our understanding summarized without undue emphasis on any one particular theoretical interpretation. The viewpoint of the authors is

frankly eclectic. Emphasis is given to experimental evidence wherever available.

Three introductory chapters (I-III) deal with the terminology and basic concepts used to describe and classify varieties of human abnormality.

The next 14 chapters (IV-XVII) are devoted to a description of the conventional diagnostic categories commonly used to classify abnormal persons. These include dementia praecox, manic depressive psychosis, neurosis, epilepsy, mental deficiency, disorders of old age, involutional melancholia, alcoholism, general paresis, organic brain disorders, and psychopathic personality. The content of each of these chapters is organized according to the general pattern: introduction, case histories, personal experience, facts and figures, history of the concept, physiology, psychology, summary, and references.

Three chapters (XVIII-XX) are then devoted to a brief but competent summary of the hereditary, cultural, sociological, and developmental factors in etiology.

Six chapters (XXI-XXVI) on psychopathology discuss systematically the disorders of sensation, perception, action, speech, memory, emotion, volition, and intellectual functioning.

The last 8 chapters (XXVII-XXXIV) offer a review of the contributions to our understanding of abnormal persons made by the biological sciences, education, and law.

There is a glossary of the terms used and the book is well indexed. The references listed at the end of each chapter have been carefully selected and are adequate for the beginning student without being overwhelming.

This book is to be recommended as a basic text in abnormal psychology. It is well organized and thoroughly up-to-date in content. The expression is clear and admirably succinct. Of necessity, the book leaves much for the teacher to do by way of amplification and illustration, but unusually adequate coverage of the essential material in the field is provided by the authors.

C. R. MYERS, PH. D.  
University of Toronto.



## IN MEMORIAM

JAMES S. PLANT, M. D.

1890-1947.

The death of Dr. James S. Plant, which occurred in his home in South Orange, New Jersey, on September 7, 1947 of coronary thrombosis, was received with deep regret not only by his professional colleagues, but also by parents, children, and members of other professions.

Dr. Plant was born in Minneapolis, Minnesota, on August 3, 1890. He received his undergraduate training at Hamilton College, from which he graduated in 1912. He received his M.A. from the University of Pennsylvania a year later, and his medical degree from the same University in 1918. In order to prepare himself to practice psychiatry, he studied at the Sorbonne, Paris, for two years, and on his return to this country served as neuropathologist for two years at McLean Hospital, Waverly, Massachusetts. He was assistant director of the Judge Baker Foundation, Boston, from 1922 to 1923, and was director of the Essex County Juvenile Clinic, Newark, New Jersey, from 1923 until the time of his death. In 1938 Hamilton College bestowed on him the honorary degree of Doctor of Science. He was a member of the American Psychological Association, the American Medical Association, a Fellow of the American Psychiatric Association, and a member of a number of state and local medical societies.

Surviving Dr. Plant are his widow, Mrs. Mildred Heller Plant, and two daughters, the Misses Mildred Elizabeth and Harriet Greenleaf Plant.

In addition to a broad and progressive understanding of psychiatry, Dr. Plant brought to his private and professional activities outstanding personality characteristics which made him respected and loved by all who knew him. He had a deep interest not only in his patients, but also in all professional activities that represented growth and advancement in the broad field of psychiatry, a better understanding of psychiatry and mental hygiene by the community, and in working out ways and means of enabling allied professional groups to work together more harmoniously and effectively.

In his pioneering accomplishments, which are many, he was always judicial. He had the capacity to allow others to present their points of view and then give them proper consideration. He was able to "see through the clouds" of confusion, impractical idealization, and static conservatism and to clarify discussions to the satisfaction and advantage of all. Perhaps his outstanding quality was his real interest in all people with whom he was associated or with whom he came in contact. Because of this quality, individuals from every station in life who had the good fortune to know him were attracted to him.

In the passing of Dr. Plant psychiatry and mental hygiene have lost one of its outstanding proponents; and his relatives and associates, a real friend.

FRANK J. O'BRIEN, M. D.,  
Brooklyn, N. Y.

# THE AMERICAN JOURNAL OF PSYCHIATRY

## REPORT ON LOBOTOMY STUDIES AT THE BOSTON PSYCHOPATHIC HOSPITAL<sup>1</sup>

M. GREENBLATT, M.D., R. E. ARNOT, M.D., J. L. POPPEN, M.D.,  
AND W. P. CHAPMAN, M.D.

In the latter part of 1943, a project was organized at the Boston Psychopathic Hospital for the treatment of psychiatric patients by means of prefrontal lobotomy—a surgical operation advocated originally by Egas Moniz of Portugal and Walter Freeman of this country. The surgery was done by Drs. Gilbert Horrax, James Poppen and other members of the neuro-surgical department of the Lahey Clinic, acting as surgical consultants, and the psychiatric work by the regular staff of the Boston Psychopathic Hospital. Although this form of therapy was approached originally with considerable skepticism, after 3½ years of experience in a wide variety of patients, all of whom had been given a hopeless prognosis, we now believe that prefrontal lobotomy has won a definite place in the treatment of serious mental diseases.

Instead of approaching from the temporal region, Dr. Poppen has preferred to operate, as did Lyerly, by means of a superior approach making a trephine opening one inch in diameter, about 4 cm. anterior to the coronal suture and 4 cm. lateral to the midline. The main point is that everything is done under clear visualization. The plane of the section passes just in front of (sometimes through) the anterior horn of the lateral ventricle ending below at the border of the sphenoid ridge. All of the white fibers in this plane are severed with due regard for the blood supply. The precision of location of the plane of section is, of course, a doubtful point, Dr. Poppen being of the opinion that the planes of section must all lie within a band that is at most two centimeters wide.

The decision for operation was made by

the psychiatric staff, the prime criterion being that the patient had had an adequate trial of therapy, would not profit from any more of the standard treatments and could, therefore, be considered a hopeless case. With few exceptions all these patients had previously received electric shock treatment, insulin shock treatment or both and some had received prolonged intensive psychotherapy. The majority of our patients were chronic state hospital cases who were suggested for operation by the superintendents of the various Massachusetts state hospitals. In not a few instances the selection was made on the basis of very disturbed behavior with the inherent difficulty of caring for the patient.

Once the criterion of hopelessness was established, the appraisal of the physical condition and capacity to withstand the operation became important. The great majority of our patients were physically well and presented no exceptional operative risks; however, in view of the hopeless nature of the psychosis and the willingness of the relatives to take the risk, a few aged arteriosclerotic and cardiac cases were accepted for operation.

From October 1943 to April 1947, 247 patients received this operation at the Boston Psychopathic Hospital. Two cases were done in 1943, 12 in 1944, 58 in 1945, and 134 in 1946. Of the 154 cases done before October 1946, we are considering a group of 147 cases on whom we have adequate follow-up data to April 1, 1947—making a minimum follow-up period of 6 months and a maximum of 3½ years.

The report of our experiences is divided into two parts: Part I. Clinical Results; Part II. Research Studies.

### I. CLINICAL RESULTS

Eleven cases have expired during the follow-up period; only 2 of these, however, could be considered operative deaths. The

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

These studies were conducted under the direction of Dr. Harry C. Solomon, and with the collaboration of Drs. C. P. Coon, A. S. Rose, M. Rinkel and Mr. C. Atwell.

other 9 cases died 2 or more months after operation and following discharge or transfer from the hospital. The 2 cases whose deaths could be attributed to surgery were females, aged 41 and 56 years respectively, who died 11 and 5 days post-operatively after developing convulsive seizures. In one, at post-mortem, a hemorrhage was found in the operative site of the left hemisphere which had ruptured into the left ventricle. In the other, the post-mortem cause of death was given as acute cardiac failure.

Two operative deaths in 147 operations constitutes a surgical mortality of 1.4 percent which is lower than that generally given in

family are usually satisfied that there has been a definite gain and that the operation was worth doing.

Briefly the operation was worth doing in 88 cases (65 percent of the total); gratifying results were achieved in 36 of these cases (26 percent of the total); and stellar results were achieved in a dozen cases (9 percent of the total).

Our results by clinical diagnostic categories roughly parallel those already reported in the literature. Of a rather large group of dementia præcox cases (98) 20 percent did well (good condition), 37 percent are in fair condition, and 40 percent are in poor condition. Paranoid dementia præcox cases, on the whole, fared best and hebephrenic dementia præcox fared worst, but some good results were obtained in every category of schizophrenia. The results for involutional psychosis are very encouraging, for 13 out of 14 improved and 8 of the 14 are now in "good condition." Two of 4 obsessive-compulsive psychoneurotic cases are in "good condition" and 2 are in "fair condition" on April 1. We are well aware of the shortcomings of diagnostic labelling and realize that some of these cases would bear other labels in other hospitals.

Our experience with schizophrenic patients can be summarized in terms which are familiar to the psychiatrist. Those patients with a sounder pre-psychotic adjustment, with an abrupt onset, with worry, fear, and depression, with relatively simple delusional systems, and with some residual cohesion or integration of the personality fared best with lobotomy (although they had failed to respond to other measures). However, prediction of results with lobotomy in schizophrenic cases is not infallible and surprises occur.

The age of the patient at the time of operation in relation to the eventual clinical result is summarized in Fig. 2. The cases are arrayed in 3 groups: those under 25 years of age, 25-45 years of age, and over 45 years of age. No remarkable effect of age on lobotomy result is evident.

We have analyzed the results in terms of duration of hospitalization prior to lobotomy. It is interesting that for our cases the dura-

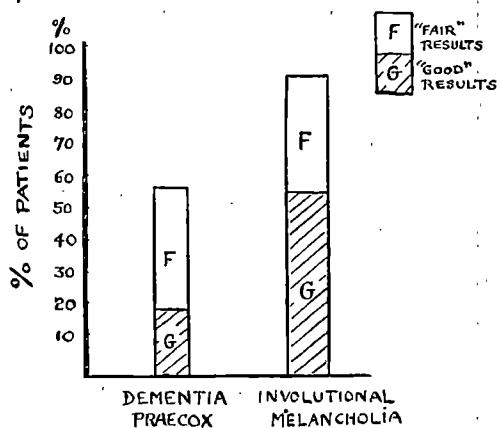


FIG. 1.—Percentage of "fair" and "good" results of lobotomy in cases diagnosed dementia præcox and involutional melancholia.

the literature. The low mortality (especially in view of a number of aged and infirm cases) and the smooth post-operative course typical for so many of our patients are both a tribute to the skill of the neurosurgeons. Most of our patients are up and about in 4 to 5 days.

The clinical results are shown in Fig. 1. By "good condition" is meant that the patients are free from psychotic symptoms and are able to work. By "poor condition" is meant that the patients still suffer from gross psychotic symptoms and are a burden to the family or the community. The "fair" results are those patients with varying degrees of alleviation of psychotic symptoms; many have made a better adjustment, are easier to manage, or are able to work in the hospital. The hospital superintendents and the

tion of hospitalization prior to lobotomy has had no remarkable effect on the outcome.

We have analyzed the effect of duration of hospitalization on the percentage of cases that could be sent home after lobotomy. Here a fairly clear trend is noted and there is some internal consistency despite relatively small groups. Fig. 3 shows that home discharge was possible for many of those hospitalized for short intervals prior to lobotomy and for few who had been hospitalized for long intervals before lobotomy. A patient who has been hospitalized consecutively for many years has broken most, if not all, his ties with

do not imply that these symptoms are invariably relieved but that they are remarkably diminished or disappear in a very high percentage of cases. In a very few instances these symptoms appeared after lobotomy or were increased by lobotomy.

(B) A second group of symptoms may be described which are less frequently relieved by lobotomy and often are merely alleviated or partly allayed. The patient then becomes a more tractable citizen of the community or hospital. These symptoms are: depression, associability, combativeness, hallucinations, and delusions.

(C) A third group of symptoms are important because they appear for the first time

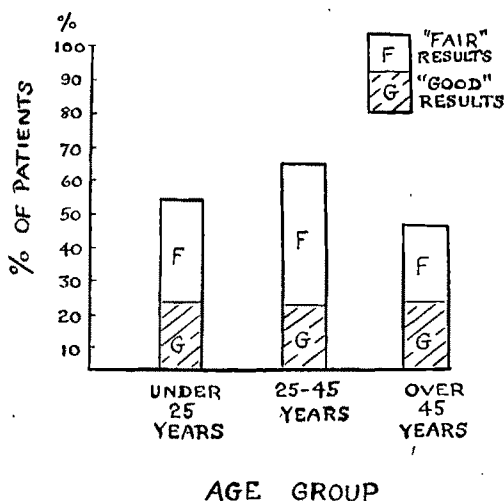


FIG. 2.—Percentage of "good" and "fair" results following lobotomy in relation to age group (under 25 years; 25-45 years; and over 45 years).

his environment; and even if he does well after lobotomy, there may be no home to receive him.

In addition to study of the total clinical picture, a review of specific symptoms was made in order to determine which symptoms were most frequently alleviated by lobotomy and what new symptoms arose after lobotomy. The effect of lobotomy on clinical symptoms may be considered as follows:

(A) There are certain symptoms which are so regularly relieved that one may consider lobotomy almost specific for them. These symptoms include "nervousness," tenseness, uneasiness, fear, worry, anxiety, over-conscientiousness, obsessive-ness, and meticulousity. There may be other symptoms which belong in this category. We

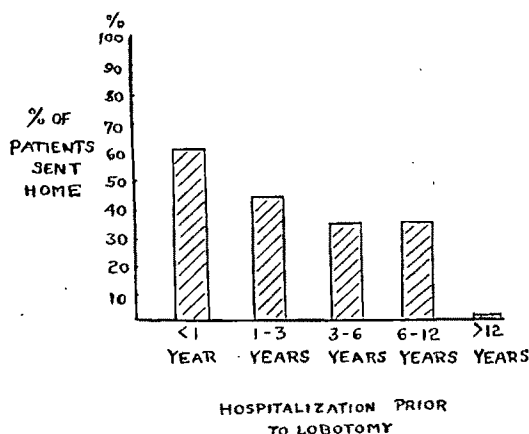


FIG. 3.—Percentage of patients sent home in relation to the years of continuous hospitalization prior to lobotomy.

after lobotomy in a good many cases. These are: laziness, irritability, moderate untidiness and carelessness, indiscretions of speech, wetting, gain in weight, and seizures.

Undoubtedly the most consistent post-operative complaint of relatives is "laziness"—by which they may mean inertia, lack of initiative, spontaneity or drive, tendency to delay, morning lounging, etc. Unfortunately, irritability is often shown when relatives try to force these patients to do something. Gain in weight varied from 5 to 60 pounds and increased appetite and intake go along with it. (Changes in glucose metabolism have been demonstrated in our laboratory.) Some patients who may have preserved initiative and interest have, nevertheless, shown callous attitudes and blunting of finer sensitivities

which have gotten them in trouble at home and at their jobs. For instance, one mild and meek teacher of physical education, depressed and sexually inadequate for years, after lobotomy became sexually potent, which pleased his wife very much; but had a tendency to fly off the handle easily, which frightened the wits out of her; on his job he took to cuffing out the boys at slight provocation and committed many indiscretions of conduct which led to his discharge. When he returned to the hospital, his wife was in tears but our patient took it all with philosophic calm.

Wetting is a frequent post-operative complication which concerns nurses in particular. Almost 20-25 percent of our patients continue to wet for longer than one week; the difficulty may go on for months but with gradual clearing. We know of no case that has continued to wet persistently after operation who was not a wetter before operation. Regular toileting every 2 to 3 hours gets the patient's bladder emptied sufficiently often to keep the nursing morale above the breaking point.

Epileptiform seizures have occurred in 10 percent of our cases. They are usually sporadic, and do not appear to alter the clinical course seriously. If, however, they occur in the immediate post-operative period we are inclined to view them with alarm inasmuch as the 2 of our cases recorded as surgical deaths died following seizures.

## II. RESEARCH STUDIES

A. The *psychological tests* used to investigate the effects of lobotomy were the Rorschach and the following abstraction tests—Goldstein Block Designs, Weigl Form-color Sorting, Color Sorting and the Shipley test for abstraction. Records before and after lobotomy were obtained on 35 patients. Approximately 70 others were tested either before or after operation, the results of which tests help to validate the conclusions from the more complete examination.

In the Rorschach tests the patients after lobotomy showed much more perseveration, more stereotypy, and less fantasy or creative imaginativeness. There is evidence of reduced spontaneity and initiative. Despite a narrowing or constriction of the range of

reactions, there are indications of freer emotional expression and fewer restrictions on the patient's affect. These changes frequently interfere with judgment.

The noteworthy findings on the various abstraction tests were these: Most patients exhibited slightly more concrete performance and poorer abstraction. Indecision and increased effort to perform the task were noted on the Goldstein series. Difficulty in shifting attitudes (a rigidity of mental set) was outstanding in the Weigl Form-Color Sorting test. Abstraction difficulties noted on the Shipley test were difficult to evaluate because the patients exerted little effort and responded with practically no regard for the problems ("slap-happy attitude").

Three cases have been selected for examples:

(1) Mr. A., age 56, when first examined pre-lobotomy showed considerable preoccupation with obsessive trends, withdrawal from reality and no impairment of abstract performance. Immediately after operation his work on the abstraction material was unchanged (no impairment) but on the Rorschach he gave a completely stereotyped record. Three months later, there was some impairment in abstraction and the Rorschach again consisted of stereotyped responses. Nine months after the original operation and 2 months after a second operation, the psychological picture was unchanged over the last examination. The final examination 2½ years after the original operation showed some improvement in abstraction and less stereotypy on the Rorschach.

This case is remarkable because of delayed impairment of abstraction after the first operation, and eventual improvement in abstraction abilities, despite a second operation.

(2) The second patient, Mr. B., age 31, whose pre-lobotomy record can be summarized as showing obsessional traits, sexual preoccupations, inferiority feelings and feelings of guilt, gave a completely different and somewhat alarming picture on his post-lobotomy test. There was considerable evidence of strong aggressive trends. In addition, the second record was filled with violence—*Card I*: "a cat about to do something vicious"; *Card IV*: "the body of a man burned up, it's lying on the pavement, there's no sheet pulled over it yet, it's all scorched." In response to the question, "How do you feel after your operation?" he said, "I feel better, I haven't gotten into any rows but I feel as though I might." This case is a remarkable example of hostility released by lobotomy.

(3) The third patient, Mr. S., age 39, before operation showed an essentially schizophrenic picture with evidence of strong obsessive-compulsive trends. Five months later no response was obtained

on three cards (4, 9, 10) and the responses on the others were completely stereotyped. The abstraction tests showed slight impairment with the usual disregard for the problems on the Shipley test. This case presents a picture quite typical for the lobotomized schizophrenic individual—*i.e.*, a paucity of responses, extreme stereotypy and perseveration, and slightly impaired abstraction.

B. A summary of *physiological* experiments designed primarily to test the changes in the autonomic nervous system resulting from prefrontal lobotomy follow:

(1) The sympathetic nervous system was tested pharmacologically pre- and post-lobotomy by the intravenous injection of 0.5 mg. of epinephrine (1:1,000). The elevation of blood pressure following epinephrine injection was much greater in patients after lobotomy than before—the response was approximately doubled. Pilomotor reactions and shivering were more frequently observed in patients after lobotomy than before.

(2) The parasympathetic nervous system was tested by compression of the carotid sinuses and by following the clinical electroencephalographic and electrocardiographic effects. Slowing of the heart, and cardiac arrest were obtained more frequently and with greater facility after lobotomy than before lobotomy. These manifestations indicate greater sensitivity of that part of the carotid sinus mechanism regulating the heart action—an effect which is mediated by way of the vagal branch of the parasympathetic system.

With sustained compression of the carotid sinuses or of the common carotid arteries bilaterally, it is possible to obtain tonic-clonic convulsive seizures of short duration in a high percentage of individuals. This effect we believe to be due largely to cerebral anemia from circulatory occlusion. The seizure is accompanied and introduced by an acute outburst of high voltage slow waves at 3 per second in the EEG arising from all cortical areas.

After lobotomy, we have observed an increased susceptibility to seizures (and the accompanying EEG changes) induced by compression of the carotids in almost all patients.

The increased response of the heart to carotid sinus stimulation, and of the blood pressure to epinephrine injections which were

observed in patients after lobotomy indicates that this operation releases both divisions of the autonomic nervous system from a controlling influence, and that controlling or regulating function for the vegetative nervous system is located in the frontal association areas.

The increased susceptibility to convulsions resulting from carotid occlusion suggests that post-lobotomy the brain is more sensitive to acute cerebral anemia.

C. *Blood Pressure Studies.*—Early in our experience with lobotomy, it was observed that following the operation, blood pressure was reduced and in several patients with hypertension the blood pressure fell to normal levels for considerable periods. These observations stimulated an investigation which has now been in progress 10 months. These studies consist in (1) multiple blood pressure readings before and at intervals after operation in normotensive and hypertensive patients, and (2) observation of blood pressure and pulse rate in response to various stimuli.

A slight but definite reduction in blood pressure was observed in 11 normotensive individuals 15 to 30 days after operation. At the end of 3 months, the blood pressure values in all but one case returned approximately one-half way to the pre-operative levels. At 6 months, the blood pressure values returned to the pre-operative levels. In the one case, at 3 months and again at 6 months, the blood pressure was significantly higher than at any time previously observed by us. A history of hypertension several years previously was obtained in this case.

Eight patients with persistent hypertension have been studied before and for 1 to 5 months after lobotomy. In all cases there was a significant fall in blood pressure in the first 2 to 4 weeks following operation. However, 7 of the 8 cases have subsequently shown an elevation of blood pressure to at least the lower range of the pre-operative readings.

During the periods of testing in both groups of patients, factors such as cooperation, restlessness, irritability, apprehensiveness, general muscular tension, were especially noted and were essentially unchanged following the surgery.

The blood pressure and pulse rate in response to the following stimulus situation are being studied in patients before and after operation in both normotensive and hypertensive patients.

(1) Immersion of hand in ice water for one minute.

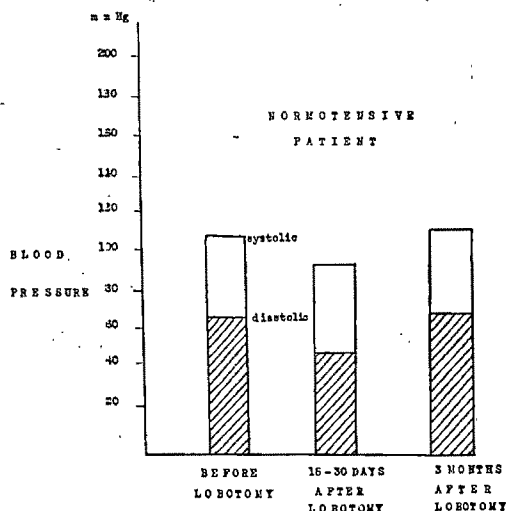


FIG. 4.—Normotensive patient: effect of lobotomy on the systolic and diastolic blood pressure.

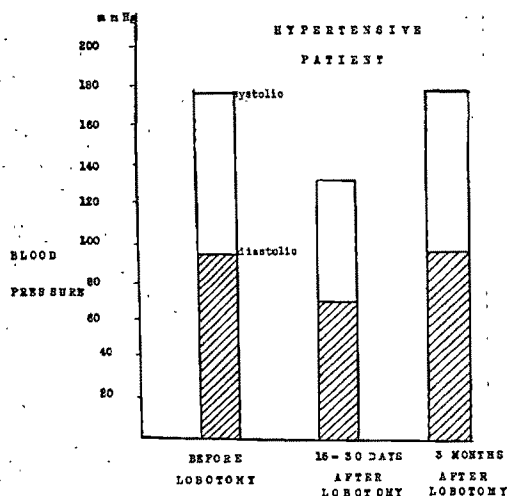


FIG. 5.—Hypertensive patient: effect of lobotomy on the systolic and diastolic blood pressure.

(2) Induction of deep pain by graded pressure on the tendo-achilles.

(3) Startle reaction by pistol shot.

(4) Carotid sinus massage.

(5) Graded exercise.

(6) Changes in posture.

At present, no definite and persistent changes in the blood pressure and pulse rate response to these stimuli have been observed, with the possible exception of the ice water tests. In these, the blood pressure at 15 days post-operative rose with the ice water stimulus to the same absolute levels as before operation; in view of the lower basal blood pressure reading at the period, the percent change of the blood pressure was greater in the operated patients.

Studies on more patients and longer periods of observation will be essential to arrive at satisfactory conclusions of the effect of lobotomy on autonomic control of blood pressure.

#### CONCLUSION

It is clear that the results of prefrontal lobotomy are quite variable. Clinically a few cases are dramatically improved and may be restored to a healthy efficient life in the community, a rather large number are partially improved or rendered more comfortable, and a good many are essentially unchanged. There is always a small but definite risk to life, and there is always the possibility of producing new and undesirable symptoms. As yet, we are quite unclear as to the exact indications for the operation. However, we would venture the opinion that by selection of early and relatively well-integrated cases, we would get a better percentage result. We would go on record as saying: that lobotomy is a good method, perhaps the foremost method, for the treatment of the chronic mentally ill patient.

The changes in the personality are very variable and complicated, and great caution should be exercised in interpreting psychological results. There is no question that prefrontal lobotomy offers a very rich field for research.

#### DISCUSSION

WALTER FREEMAN, M. D. (Washington, D. C.).—The results of the Boston Psychopathic Hospital are good but they could be improved by attention to three aspects which we have found of considerable importance. The first of these is the choice of the patient on the basis of the emotional tension still manifest. Take a wildly excited schizophrenic early in the course of his disease and the outcome will almost always be favorable. I was very much impressed with the high discharge rate

of the patients in this series that were operated on in the first year of hospitalization.

The second is the choice of the family. Preference should be given to patients whose families have not closed ranks and assigned their member to a mental hospital, but who still show an interest in the postoperative rehabilitation. Given a helpful, cooperative family, a great deal can be done even in the most chronic cases of schizophrenia and of agitated depression.

The third is the choice of the operation. With the refinement and precision introduced by Watts and myself, we believe that the "band of the operation" which is set by the authors at 2 cm. should be greatly narrowed. In fact before each operation Watts and I go over the situation and decide where to make the incisions with relation to the sphenoidal ridge. In severe chronic cases with deterioration, the incisions have to be made 6 to 10 mm. behind the plane of the sphenoidal ridge if results are to be achieved. On the other hand, in elderly patients this results in extreme inertia and, in better preserved cases, in needless sacrifice of personality achievement. It is remarkable how little frontal lobe is required for a person to earn a living. The surgeon should call his shots before operation and should mark them with some opaque medium afterwards so that if he fails he will know where to make them again. Prefrontal lobotomy can be a precise and very exact operation. We do not consider the open operation meets these requirements. The limit of tolerance for deviation of the incisions should be 2 mm. rather than 2 cm.

During this convention I have spent much of the time when I should have been at meetings, calling up and interviewing our former patients from the New York area. These amount to 50 in number with 1 operative fatality, 3 subsequent fatalities and 7 cases too recent to estimate. Of the 38 cases, 19 are usefully occupied and 8 are hospitalized.

It is very encouraging to see what a good job the workers at the Boston Psychopathic Hospital are doing. I am sure they will strive for even better results in the future and these will come when patients are operated upon before deterioration has occurred, or rather before it has been masked by repeated courses of shock therapy.

LOTHAR B. KALINOWSKY, M.D. (New York, N. Y.).—Those of us who work in this field and realize the difficulties of statistical evaluation of the essentially symptomatic effect of prefrontal lobotomy, can only be highly impressed by this paper. At the Neurological Institute in New York, Dr. Scarff and I are doing prefrontal lobotomy. The dangers of the operation seem to be negligible with the open technique as used by Dr. Poppen as well as at the Neurological Institute. The results will depend entirely on the proper selection of cases, and it is in this field that we still have to learn a lot. The most convincing results are obtained in severe psychoneurotics, but here we will all be reluctant to recommend the operation as long as there is still some hope for psychological methods.

In schizophrenics who represent by far the largest percentage of cases treated with prefrontal lobotomy, the main requirement will be adequate shock treatment prior to the operation. My own work in shock therapy guarantees that in our material the cases were limited to those where all possible shock treatments had failed. However, this conservative attitude does not mean that only hopelessly deteriorated cases should be operated on. Our experience shows just the opposite, namely that we should operate as soon as we can be sure that further shock treatments will be of no avail. Treatment of schizophrenics still suffers from lack of planning. Patients receive a few shock treatments here and there, have some insulin therapy—frequently without ever reaching the coma stage—and all this at long intervals. In this way valuable time is lost, and when the relatives become desperate they cry for prefrontal lobotomy. It should become a rule that as soon as the diagnosis schizophrenia has been made, a clear treatment plan should be outlined. The patient should receive a full course of electric shock therapy or insulin, or both, or these two treatments should be combined. As soon as one treatment has failed in spite of a sufficient number and intensity of treatments, the other treatment should follow. It is usually possible to recognize the failure of shock treatments in unfavorable cases in less than a year. There is no reason why prefrontal lobotomy should not be considered at such time. In this way results of the operation will be considerably better, and residual symptoms of intellectual and emotional deterioration will be much less than in patients who have been schizophrenic for 5 or 10 years.

MAGNUS C. PETERSEN, M.D. (Rochester, Minn.).—The statistics dealing with the results of prefrontal lobotomy are somewhat confusing. This is due first to a lack of uniformity in the criteria of selecting patients and secondly to variations in the surgical procedure, that is, the severity of cutting. Since our earlier cases showed considerable inertia and a tendency to a masking of the facies after the operation, we decided to cut less severely. In order to have a simple designation, Dr. Love of the Mayo Clinic graded the cutting from one to four according to the position of the section.

During the past 4½ years we have used the grade 3 operation in most cases. As a result the unpleasant after-effects, such as inertia, untidiness, confusion, and lack of conformity to accepted social behavior, have been greatly minimized.

So far only 3 of 102 patients on whom the grade 3 operation was performed have developed convulsions as compared to 14% of those who had the grade 4 operation. As a whole the clinical results have been better with the less severe cutting. Fifty percent of the state hospital patients have returned to their home communities. A number of those remaining hospitalized are improving.

Four years ago I pointed out that clinical evidence indicated that the functions of the autonomic nervous system might be altered by the procedure. Thus we noted a flattening of the blood sugar curve



after the operation. Since, we have found low blood sugar levels in 2 patients immediately after convulsions. In one the blood sugar was 33 mg. per c.c. when he was in a series of convulsions. The seizures stopped when dextrose was injected intravenously. Recently one patient developed hyperglycemia immediately after the operation. The war-time stress prevented us from making a systematic study of dextrose tolerance before and after the operation in a large number of cases.

In collaboration with the Mayo Clinic we are at the present time studying some of the autonomic functions before and after the operation. To us it seems possible that the psychic changes may be due to alterations in the functions of the autonomic nervous system. It is gratifying to know that the thinking of others is pointed in the same direction. I hope the authors will report the results of their investigations of autonomic changes following the operation.

# THE SIGNIFICANCE OF ALPHA VARIANTS IN THE EEG, AND THEIR RELATIONSHIP TO AN EPILEPTIFORM SYNDROME<sup>1</sup>

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*Banting and Best Department of Medical Research  
University of Toronto*

## INTRODUCTION

The clinical application of electroencephalography to psychiatry and neurology is beset with many difficulties. These are ascribable in part to the overlap that exists electroencephalographically between normal and clinical populations. A small proportion of patients will display electrocortical abnormalities so gross as to be practically pathognomonic of certain conditions. In a much larger percentage of cases the EEG findings, when considered in conjunction with the clinical findings, are of considerable diagnostic assistance. There is a third group, however, whose EEGs, while of questionable quality, are not sufficiently abnormal to warrant a classification other than "borderline normal."

In the epilepsies, the psychic equivalents have contributed heavily to the "borderline normal" group. Investigators are by no means agreed as to what constitutes an EEG indication of a psychic variant. The fault is not entirely the electroencephalographer's, since the clinician readily admits that he too is uncertain as to the nature and range of manifestations of this condition. As a result there has been confusion, disagreement as to clinical terms, and even at times a

real doubt as to whether psychic equivalents actually exist except as bizarre manifestations of other types of epilepsy, or of hysteria.

The reports of Gibbs, Gibbs and Lennox (1, 2), describing specific abnormal electrical patterns that accompanied seizures which they termed psychomotor attacks, were genuine contributions to our knowledge. In common with most other workers, however, we were disappointed by the small number of these cases in which the EEG proved to be of diagnostic assistance. Few patients had attacks of this nature while connected to the EEG machine, and many whose histories were strongly suggestive of the condition exhibited cortical patterns indistinguishable from those of normal subjects. In a few cases well-defined square-topped cortical activity was recorded from patients whose clinical manifestations could be classified most accurately as psychoneurotic or even psychotic.

It was decided in 1940 to commence a long-term study of the so-called psychomotor variants in the EEG, to collect and classify all available information on patients or others exhibiting these slow rhythms, and to attempt a correlation between the clinical and the electroencephalographic data so obtained. The present paper constitutes a preliminary report of the findings.

## TECHNIQUE

All recordings were made on 4-channel machines with Grass ink-writing oscillographs. Standard recording conditions have been maintained whenever possible. Various bipolar and "monopolar" runs were made routinely, using bilateral frontal, central, temporal, parieto-occipital, and ear lobe electrodes, and the patients were overbreathed for several minutes at the conclusion of the test. EEG changes occurring during hyperventilation were assessed conservatively and

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

This work was supported in its early stages by a grant from the Rockefeller Foundation, and is a joint project of the Banting and Best Department of Medical Research and the Department of Psychiatry, University of Toronto. The author is indebted to Dr. Chas. H. Best for the facilities that made this work possible, and to Dr. Clarence B. Farrar, Professor of Psychiatry, for his cooperation and kindly criticism. It would be impossible to list individually the many physicians to whom we are indebted for case material and follow-up data. The recordings, taken at the Toronto Psychiatric and Toronto Western Hospitals, were made by Mr. W. C. Wyand, EEG technician, whose assistance is gratefully acknowledged.

in the main did not contribute materially to the findings reported.

### FINDINGS

#### (1) *Alpha Variants in the EEG*

(a) *In Normal Subjects.*—During the war EEGs were taken on many thousands of young male subjects who had been ex-

any significant features. Many were re-interviewed by psychiatrists or neurologists, and with one exception all denied that they were subject to attacks in any way resembling psychomotor states.

Closer examination of the EEGs of these men showed that the square-topped waves were occurring at exactly half the rate of the concurrent alpha or "10 cycle" rhythm. In

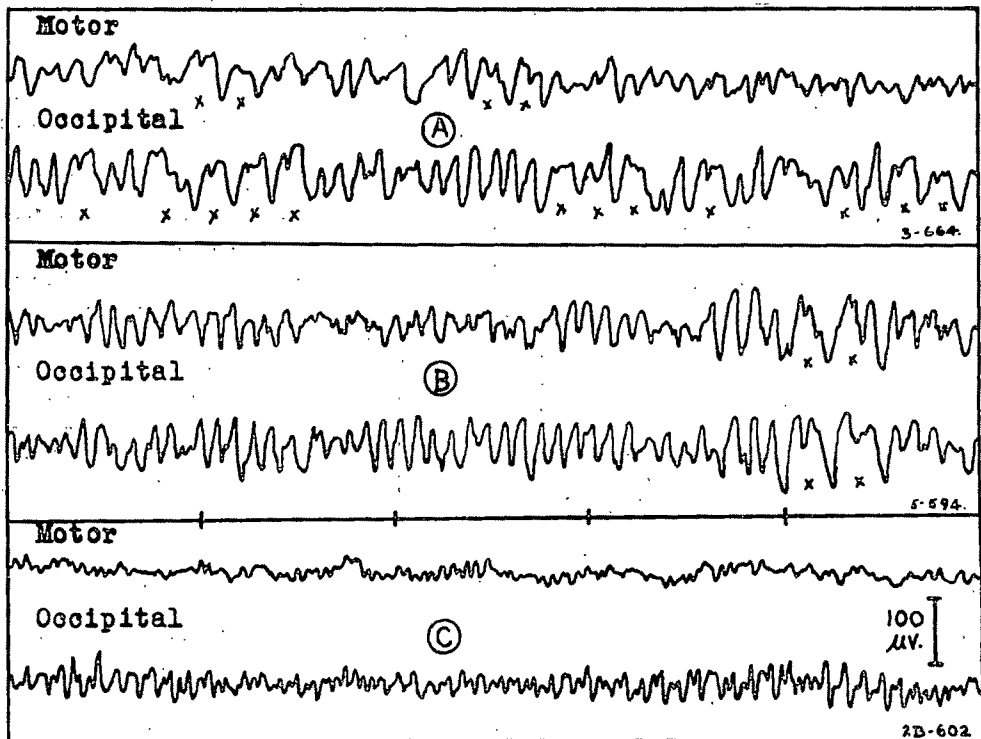


FIG. 1.—Examples of alpha variants in electroencephalograms of presumably normal subjects. "Monopolar" recording.

- A. Continuous output of slow variant.
- B. Paroxysmal bursts of slow variant.
- C. Long trains of fast variant.

amined medically and accepted by the R. C. A. F. The examinations included psychiatric studies. It can be assumed therefore that as a group these individuals represented an above-average sample of the general population, physically and psychiatrically.

It was noted that in every thousand of these recordings that were examined, 10 to 15 showed electrocortical activities indistinguishable from those associated by Gibbs and his colleagues with psychomotor epilepsy. (Fig. 1). A study of available medical documents of these men failed to disclose

a few cases the ratio was 1 to 3, and on rare occasions 1 to 4. The relationship was obscured somewhat by a tendency of the alpha waves to decrease slightly in rate in the presence of the variant, but alpha activity very close to, or preferably simultaneous with, the slow disturbance, demonstrated the quantitative relationship. In some individuals the slow rhythm was more or less continuous (Fig. 1A); in others it was definitely paroxysmal (Fig. 1B).

In many recordings the slow square topped waves were accompanied by a charac

teristic fast frequency potential at approximately 20 cycles per second, or exactly twice the rate of the alpha rhythm (Fig. 1C). When a well defined burst of the latter discharge was recorded, its relationship to the alpha activity became apparent. The alpha waves were bifurcated by harmonic activity, and the absence of a "beat" or heterodyne phenomenon demonstrated the simple numerical relationship between the two frequencies. These 5 and 20 cycle per second potentials were termed "alpha variants." Typical examples of the slow and fast variants are shown in Fig. 2, enlarged

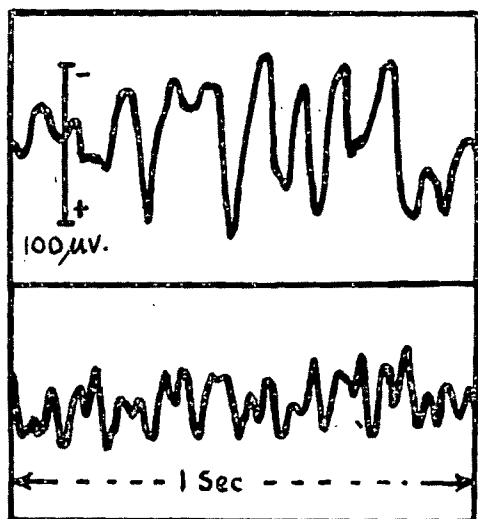


Fig. 2.—Enlarged samples of slow and fast alpha variants, showing relationships to alpha rhythm.

to twice the normal size. Both samples were recorded from occipital lobes. The relationship to the alpha rhythm is evident.

With a quantitative method of identification available, it soon became apparent that the alpha variants were of more frequent occurrence than had been realized. After some experimentation, it was found that the appearance of two consecutive square-topped slow alpha variants could be recognized reliably in an EEG. This was therefore chosen as the minimum significant amount. The presence of the fast alpha variant was much more difficult to establish, since measurement is less accurate at this higher frequency. The bifurcation of the alpha activity was finally selected as the most reliable guide.

Using these criteria, the EEGs of 550

presumably normal individuals were chosen at random from a much larger number and examined critically. The percentage of recordings containing the alpha variants is shown in Table I. In all, the recordings of 10 percent of these subjects contained traces or more of the alpha variants.

(b) *In Patients with Psychic Equivalents.*—Clinical examples of psychic variants sufficiently clear-cut to warrant a diagnosis of psychomotor epilepsy have not been common in the past. Over a period of several years, however, a number have been seen, and have been examined electroencephalographically. On those rare occasions when actual attacks have been recorded, the cortical patterns were similar to those described

TABLE I  
INCIDENCE OF ALPHA VARIANTS IN VARIOUS POPULATIONS

Population	Percent showing traces or more of alpha variants			Total
	Slow	Fast	Slow + Fast	
Selected normals ... (550)	6	1	3	10
Psychoneurotics ... (94)	34	6	5	45
Epileptics ..... (133)	51	11	11	73

Classified according to final diagnosis (prior to 1945).

by Gibbs, Gibbs and Lennox. It could be demonstrated by measurement that the slow square-topped waves recorded during the attacks, were chiefly sub-multiples of the concurrent alpha rhythm, as in the case of the normal subjects. The 20-cycle or fast variant was also present in some cases.

It is apparent that other electrocortical changes can and do occur during psychomotor attacks. Usually there is a marked increase in alpha amplitude, particularly in frontal lobes. The high voltage may be momentary (Fig. 3A), or sustained for many seconds (Fig. 3B). Sometimes there appears to be a shift in alpha rate to a lower frequency (Fig. 3C), and the square-topped waves may be sub-harmonics of the new rate. Occasionally several of these phenomena occur together, and may be further complicated by the appearance for a time of sinusoidal rather than square-topped waves (Fig. 3D). In the main, however, the sub-harmonic and harmonic relationship to the dominant rhythm is maintained.

EEG recordings taken on these patients between attacks almost invariably show traces of the slow and fast alpha variants. A very apprehensive individual may fail to manifest the activity on the initial recording, but a second attempt will usually be successful. The amount of one or both alpha variants may vary widely, and does not appear to be closely related to the frequency of the

In approximately one-half of the cases diagnosis was difficult on the basis of available information. Insofar as the more obvious types of idiopathic epilepsy may not have been adequately represented in the series, it is possible that the value of 73 percent mentioned is not a true indication of the incidence of the alpha variants in major epilepsy. Nevertheless, it is apparent that the

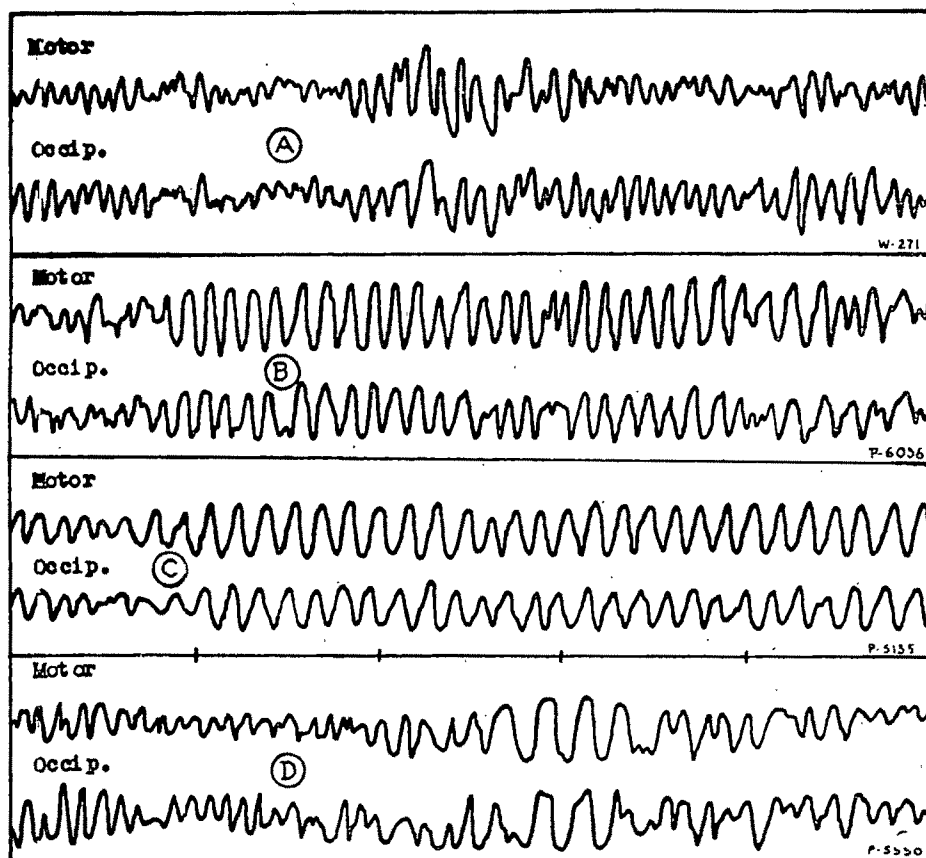


FIG. 3.—Elements of psychomotor activity in EEG, illustrating changes that may occur, separately or in combination. (For details see text.)

patient's spells. Examples of between-attack EEGs are shown in Fig. 4 (A and B).

(c) *In Patients with Major Attacks.*—The EEGs of 133 patients with histories of grand mal attacks were examined. It was found that 73 percent of the recordings contained recognizable traces (or more) of the alpha variants. (Table I.)

A careful survey of the history summaries of these cases suggests that they may not be wholly representative of epileptics as a class.

alpha variants can occur frequently in recordings from patients known to have grand mal attacks.

(d) *In Patients Diagnosed as Psychoneurotics.*—A similar survey was made of the EEGs of 94 patients who prior to 1945 had been diagnosed as suffering from various types of psychoneurosis. Forty-five percent of the recordings contained alpha variants to a greater or lesser degree. Break-down by type of variant is shown in Table I.

As in the case of the epileptics, the possibility of preselection within this group cannot be ruled out. It was obvious that many cases presented problems in diagnosis, and frequently the EEG was requested to assess the possibility of some contributory etiology.

## (2) *Correlations between EEG and Symptomatology*

Before referral for an EEG, each patient received at least preliminary examination in

suffered chiefly from complaints of a more sustained nature. This difference was so marked that it was investigated with some care. Finally a classification of the episodic complaints was evolved, and is shown in Table II. The incidence of the various symptoms in (a) 43 cases with alpha variants in the EEG, and (b) 51 cases in which the variants could not be found, is given. It is seen that the episodic type of disorder is much more frequent in patients whose EEGs contained one or both alpha variants.

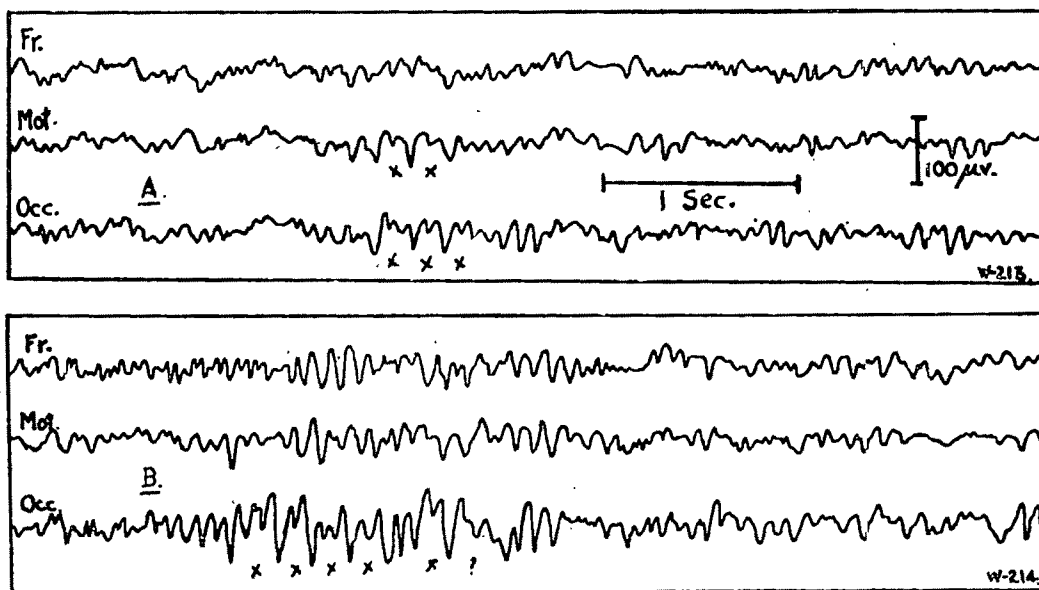


FIG. 4.—Alpha variants recorded between attacks of psychic variant type. Simultaneous temporal area recordings omitted, as they showed no abnormality.

A. History of "faints" for many years. One severe attack observed in psychiatrist's office.

B. History of headaches, "shaking spells" and episodes during which he seems unconscious of his surroundings, and says things which he later does not remember.

a general or psychiatric hospital, or in the office of a consultant. The history, and neurological and psychiatric findings, usually supplemented by subsequent observations and final diagnosis, were assembled for correlation purposes. Pertinent electroencephalographic and clinical data were coded on punch cards, permitting rapid classification of the various findings.

(a) *Early Findings in Psychoneurosis.*—It was noted that most of the patients with alpha variants in the EEG were complaining of "spells" of various kinds, whereas those whose recordings did not show the variants

The symptomatology is discussed elsewhere by Proctor(3). It should be noted, however, that the complaints are not necessarily those described by the patient, but are based primarily on an interpretation of the symptoms by the consultant. Thus a history of bouts of weeping, followed by feelings of unreality, would be classified as emotional instability plus impaired consciousness. A short episode in which the patient is oblivious of his environment would be an example of loss of consciousness.

While a few patients suffered from only one of the complaints listed, a majority had

two or more. In all, 90 percent of those with alpha variants had symptoms as classified, whereas less than 25 percent of the variant-free patients could be fitted into this symptomatology.

(b) *Epilepsy (Early Findings)*.—In Table II is listed the incidence of the same complaints among the epileptic series. While the percentages were quite different from those found among the psychoneurotic group, a similar correlation between the symptomatology and the alpha variants could be demonstrated.

(c) *New Series*.—Because of the incomplete nature of the clinical data on many of the earlier cases, it was decided to compile a new series in which the symptomatology

shown in Table III. It will be seen that the incidence of cranialgia is much higher than in the earlier group. Emotional and vasomotor instability and impaired consciousness are somewhat less, because of the inclusion of known epileptics in the series. Loss of consciousness occurs somewhat more frequently than before.

Approximately two-thirds of these patients have not had attacks of major epilepsy, as far as could be determined. The remaining third have experienced one or more grand mal seizures.

Fifty-seven patients (28½%) complained of only one symptom in the list, the remainder having two or more symptoms. Except for petit mal, which occurred chiefly in con-

TABLE II  
INCIDENCE OF VARIOUS COMPLAINTS IN PSYCHONEUROTIC AND EPILEPTIC POPULATIONS

Complaint	94 cases of psychoneurosis		133 cases of epilepsy	
	With alpha variants (43 cases), percent	Variant-free (51 cases), percent	With alpha variants (97 cases), percent	Variant-free (36 cases), percent
Cranialgia .....	16	2	5	0
Emotional instability .....	40	4	20	8
Vasomotor instability .....	12	4	3	0
Impaired consciousness .....	56	14	30 *	11 *
Loss of consciousness.....	21	7	35 *	20 *
Total with one or more of above.....	90	23	67	28

\* Known petit mal cases (as disclosed by EEG) excluded.

could be compiled more thoroughly. A few patients of the earlier series were included, if they were still available for further study or if their histories were unusually complete, but by far the greater number were new patients referred for EEG examination. The series was closed when 200 suitable cases had been obtained.

In selecting suitable clinical material for the series, the only type of major epilepsy excluded was Jacksonian (except for 4 cases that were retained because of certain unusual features of the attacks). The series consisted of individuals with alpha variants in the EEG—but with no significant electrical signs of focal abnormality in cerebral cortex—whose neurological examinations were essentially negative, and have (with 2 exceptions) remained so. All were clinically abnormal cases.

Breakdown of the symptomatology is

TABLE III

INCIDENCE OF VARIOUS COMPLAINTS IN 200 PATIENTS WITH ALPHA VARIANTS IN EEG.  
(NEW SERIES)

Complaint	Percent of 200 cases
Cranialgia .....	31
Emotional instability .....	23
Other personality disorders.....	8
Vasomotor instability .....	9
Impaired consciousness .....	39
Loss of consciousness.....	40.5
History of one or more epileptic attacks:	
Idiopathic G.M. ....	32.5
Petit mal (in EEG).....	2.5
Jacksonian—including hysteroid Jacksonian) .....	2

junction with grand mal, almost every possible pair of symptoms was represented. The combinations occurring most frequently were (a) cranialgia and periods of impaired consciousness (29 times), and (b) grand

mal attacks and loss of consciousness (28 times). The latter finding is of interest, since in only 5 patients was spike and wave activity recorded in the EEG, either spontaneously or as a result of five or more minutes of hyperventilation.

The 200 patients were approximately equally distributed as to sex, 47½ percent being males and 52½ percent females. No significant difference in the type or frequency of the complaints could be demonstrated between sexes. The mean age of the males was 32.8 years; that of the females, 30.8 years. While this difference was not statistically valid ( $P=.15$ ) it was noted that the distribution curves of age were not the same for males and females. There was a disproportionately large group of females in the 15 to 20 year range, as compared with the males.

Of the 200 cases examined electroencephalographically, 130 remained available for treatment and further study. The results of various medications are described in the paper by Proctor(3).

#### DISCUSSION

*Square-Topped Waves and Alpha Activity.*—The quantitative relationship established between the slow square-topped waves of psychomotor epilepsy and the alpha rhythm aids materially in identifying the slow dysrhythmia. One can recognize the variant even when it is present in amounts that would normally not be considered significant. Similarly the fast variant, when identified by objective criteria, becomes a significant entity, to be differentiated from other fast discharges of the cerebral cortex.

Other investigators have observed the harmonic and sub-harmonic alpha variants. Hallowell Davis, in 1942, stated that he had seen similar "half and double alpha" activity in tracings from individuals who appeared to be free of psychomotor symptoms (personal communication). More recently, Finley(4) has described fast frequency that is "dichrotic" or "bicuspid" when superimposed on the 10 per second cycles. Cohn(5) has reported an 18 to 22 cycle frequency in patients with hyperemotional states, with which were associated, among other complaints, headaches, dizziness and intervals of

unconsciousness. It will be recalled that Adrian and Matthews in 1934(6) produced the fast alpha variant experimentally in test subjects by means of photic stimulation presented at twice the normal alpha rate.

Many examples of the slow alpha variant are seen in the literature. When it is displayed prominently as in the published works of Gibbs and his associates, it is identified as a psychomotor variant. Frequently it occurs in much less pronounced form, and may go unrecognized. Traces of the activity can be discerned in many of the illustrations in the literature, especially those papers dealing with the EEG in epilepsy and in behavior disorders of various kinds.

Gibbs, Wegner and Gibbs(7) have estimated that 0.5 percent of presumably normal individuals manifest the psychomotor variant in their electrocortical patterns. Our own investigations would indicate that this figure is too low. Even by rather gross criteria it can be found in 1 to 2 percent of normal subjects. If the factorial relationship to the alpha rhythm is used as the criterion, and if the fast variant is included, an incidence of 10 percent can be demonstrated.

It is interesting to speculate on the etiology of the alpha variants. Davis, in a personal communication, has suggested that the slow variant may be the result of missed or "dropped" alpha beats, and that the fast variant may occur when adjacent areas of cerebral cortex discharge alternately instead of in unison. The missed beat theory presents certain difficulties which will not be elaborated upon at this time, but the concept of an antiphonal alpha discharge resulting in a harmonic activity is an attractive one. Bipolar recordings taken over occipital lobes will occasionally show apparent harmonic activity between two areas that are each generating normal alpha rhythms. The difference appears to be one of phase relationships.

*Range of Epilepsy.*—The question of what constitutes a psychic equivalent, and its possible relationship to epilepsy as a whole, have been matters of conjecture for many years. Gowers(8), for example, held that these states were in the borderland of epilepsy—near it, but not of it. Kinnear Wilson(9) on the other hand preferred to regard the epileptic equivalents as belonging to true



epilepsy. With the findings of Gibbs, Gibbs and Lennox(2) on so-called psychomotor epilepsy, and those of Jasper, Solomon and Bradley(10) on behavior problems in children, there has been a growing tendency to associate episodic disorders of behavior to a cerebral dysrhythmia, and this in turn to an epileptiform etiology. The observations of Pacella, Polatin and Nagler(11) serve to illustrate this trend. These investigators noted a high incidence of slow waves, chiefly after a two-minute period of overbreathing, in a group of patients manifesting obsessive-compulsive states. The authors discussed the possibility that there might be a form of psychologic fit or "spasm" related to the psychomotor variants of epilepsy, and associated with obsessive-compulsive activity.

In England the literature reflects the same trend of thought. Hill(12) investigating cerebral dysrhythmia in cases with aggressive behavior, concluded that there was a kinship between what he described as the "dysrhythmic aggressive behavior" patient and the epileptic. Denis Williams(13) agreed with the probability of a common basic disorder in such cases and in epilepsy, but warned against the indiscriminate use of the term "epileptic" if it is to retain any reasonable meaning in clinical medicine.

In a recent short paper by Walter, Dovey and Shipton(14) the authors described certain experiments that suggest that they are aware of a relationship between harmonic and sub-harmonic activity in the EEG, and epileptiform attacks.

The findings of our own studies indicate that the psychic variants extend even further than was contemplated by Gibbs and his colleagues when they suggested the term "psychomotor epilepsy," since it is apparent that patients in this group need not display motor manifestations during their attacks. It therefore becomes increasingly necessary to devise an adequate terminology to describe these complaints, and to re-assess their relationship to clinical epilepsy.

*Alpha Variants and Their Relationship to Attacks.*—Since a valid statistical relationship can be established between the alpha variants in the EEG and an epileptiform syndrome, it becomes expedient to examine the relationship more closely. The cerebral

patterns recorded by Gibbs, Gibbs and Lennox during certain atypical attacks, as well as our own examples of psychic seizures, have convinced us that the vestigial alpha variants seen in the recordings of these patients between attacks represent the same activity in larval form. Penfield(15) has suggested that psychical seizures may be of two types. In one variety the attack may be the result of an abnormal discharge within the cerebral cortex, which by stimulating certain areas causes altered states of consciousness, hallucinations or bouts of bizarre conduct. Penfield has produced dream states by direct stimulation of the temporal lobe at operation. It is interesting to note, however, that the patient recognizes the sensation as a dream, whereas in a spontaneous attack of a similar type he is unaware at the time that it is an illusory experience. One may conclude that local stimulation of temporal lobe is not sufficient to produce a typical psychical attack, since it leaves the patient's critical faculties unimpaired.

It seems reasonable to assume that the extent to which the alpha variant spreads throughout the brain may determine the exact type of psychic attack. Thus a continuous output of flat-topped waves from frontal lobes alone, which we have recorded from a patient whose chief clinical manifestations were confusion and a degree of disorientation at the time of EEG recording, becomes understandable. In a recent case a bout of uncontrollable rage was preceded by a slightly slowed but abnormally high voltage alpha rhythm, coupled with square-topped waves, in the occipital regions only. This patient reported that prior to losing consciousness he had experienced a series of compelling visual hallucinations. We have recorded a small number of attacks in which, in addition to typical psychic manifestations, there were rhythmic twitchings of the limbs or face coinciding in frequency with the alpha rate or with that of the slow alpha variant. Some of these attacks were of more than one minute duration, and as was demonstrated by the movement artefacts in the EEG, the motor manifestations remained synchronized with the alpha or the variant. This suggests that the motor area too may become involved at times in the disturbance.

It may therefore be possible to regard the extremely varied clinical manifestations of the psychic equivalents as being dependent upon the areas of brain, cortical and sub-cortical, that are involved in the alpha variant discharge, exactly as occurs in grand mal. Possibly in cases where the attacks follow each time a definite pattern, an important factor may be hyperirritability of certain brain areas.

Penfield and his colleagues, if our understanding of their views is correct, attribute attacks of this type to spike discharges within the brain. Jasper(16) has stated that the electropositive sharp portion of the square-topped wave may actually be an electronegative spike potential emanating in temporal lobes, appearing in monopolar recordings as a discharge picked up by the ear electrode, and consequently reversed in phase. This possibility has been examined. It was found that occasionally the alpha variants, and particularly the slow variants, were prominent in temporal lobes. In most cases however they ranged widely throughout other areas of cortex, leaving temporal lobes largely unaffected. This was apparent in 'bipolar', as well as 'monopolar' recordings. Most of the patients showed no EEG evidence of temporal lobe localization of the type discussed by Jasper, or of sub-cortical abnormality as described by Lennox and Brody(17). It was concluded, therefore, that in general the alpha variants could be regarded as indicative of more diffuse brain dysfunction.

Another point of difference between psychomotor variants and spike discharges was indicated by Gibbs and his colleagues many years ago(2). Phenobarbiturates are contraindicated in psychomotor epilepsy, whereas they can be used in the control of disorders related to spike potentials. This selective response to medication has been confirmed by Proctor(3).

Penfield's second type of psychical seizure is one in which there is release of the higher centres by an epileptic discharge or by a post-ictal paralysis of these centres, and a taking over at an automatic or "robot" level by the lower centres. The familiar post-epileptic automatism is a well known example of this variety of behavior disorder.

In order to explain a psychical seizure on

the basis of a post-ictal state, the patient must have experienced an abnormal cortical discharge immediately prior to the attack. The writer's failure to obtain significant pre-seizure discharges in any of the 200 cases under review, indicates that post-ictal states did not contribute materially to the clinical or electroencephalographic picture in this group. Furthermore, very few of the manifestations could be truly described as automatisms. It is questionable therefore whether a prior abnormal cortical discharge, resulting in a release of lower centres, played a prominent part in the symptomatology of our series of cases.

It would appear from our findings that in all probability a psychic variant is a direct response to a specific type of cerebral discharge as Gibbs, Gibbs and Lennox have postulated. The discharge is a complex one, involving either a dysfunction or an abnormality of the dominant cortical rhythm, in which the alphas may change slightly in fundamental rate, increase markedly in amplitude, and even re-distribute themselves in a new manner over the cerebral cortex. In addition, it may (and usually does) alter to a slow, unsymmetrical sub-harmonic of the alpha rate, or to a rapid symmetrical harmonic at twice the alpha frequency. One or all of these changes may occur. There may even be sinusoidal slow wave activity at some phase of the attack.

*Specificity of the Alpha Variants.*—It is obvious from the findings presented here that the alpha variants are not pathognomonic of psychic seizures, since ten percent of a selected normal population showed traces of these variants in the EEG. Even when the variants are present in what appear to be abnormal amounts, it is not more than presumptive evidence that there are accompanying clinical states. The objection of Jasper and Kershman(18) that the "psychomotor variants" are not of marked diagnostic assistance, since they may be present in the EEGs of patients whose clinical attacks are obviously of other types, is undoubtedly a valid one. The alpha variants can occur in patients whose only known seizures are grand mal in type. Nevertheless from the standpoint of controlling the attacks, whatever their exact nature may be, the presence of

alpha variants, or in their more obvious forms the "psychomotor variants," is of more than academic interest. As the accompanying paper by Proctor endeavours to show, the variants, when evaluated in conjunction with a specific symptom complex, can be utilized in the diagnosis and treatment of certain conditions. This seems to be true whether or not grand mal epilepsy is present. As nearly as we can evaluate our findings at this stage, the variants link certain apparent neurotic traits to the epileptiform syndrome, and therefore become of clinical interest.

The presence of alpha variants in a proportion of a normal population remains unexplained. Possibly it represents a pool from which, under "stress and strain," are recruited the cases that later appear with clinical abnormalities. We do not yet know.

#### SUMMARY AND CONCLUSIONS

1. Evidence has been presented to show that the cerebral psychomotor patterns of Gibbs, Gibbs and Lennox are related to certain variations of the 10-cycle or alpha rhythm of the brain, which have been termed alpha variants. The most common variants consist of a halving or doubling of the alpha rate.

2. Even in cases of known psychomotor epilepsy the amount of the alpha variants recorded in the EEG between attacks may vary widely both among and within individuals, but practically all such patients show traces of the variants between seizures.

3. There is a high incidence of alpha variants in certain other conditions, notably psychoneurosis and idiopathic epilepsy. Their presence in the so-called psychoneurotic group shows a high correlation with a symptom complex that includes cranialgia, episodic changes in levels of consciousness, and emotional and vasomotor disturbances.

4. A high incidence of alpha variants among patients with grand mal epilepsy has been noted. The alpha variants may be correlated in these cases with altered states of consciousness (which cannot be identified electroencephalographically with petit mal), or with neurotic traits superimposed on the major epilepsy. It is concluded that mixed epilepsy of a grand mal—psychic variant type is of frequent occurrence.

5. The alpha variants are not pathognomonic of the epileptiform states. The significance of their appearance in the EEG without the accompanying symptom complex, as in the case of a small proportion of presumably normal individuals, has not yet been elucidated.

6. The alpha variants are of diagnostic assistance in cases where the neurological findings are essentially negative, and where the EEG is otherwise within broad normal limits. Under these circumstances, their presence in the EEGs of patients with vasomotor instability (cranialgia, dizziness, etc.), emotional disturbances of an episodic nature, or changes in the state of consciousness, indicate that the condition may be related to an epileptiform syndrome, rather than to a purely psychosomatic etiology.

7. The term psychomotor epilepsy is inadequate to describe the entire range of psychic variants in the epileptiform syndrome, and in our opinion should either be replaced by a more descriptive term, or its use restricted to conditions in which motor manifestations of a bizarre nature are present.

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## THE EFFECT OF VARIOUS MEDICATIONS ON PATIENTS MANIFESTING AN EPILEPTIFORM SYNDROME<sup>1</sup>

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A variety of clinical abnormalities has been associated with the psychomotor variant (slow wave variant in the electroencephalogram) of Gibbs *et al.*(1). These epileptiform episodes, in which automatic or compulsive behaviour and/or altered states of consciousness are the more common manifestations, have been termed by Gibbs "psychomotor attacks." They resemble closely Lennox and Cobb's(2) psychic variant or equivalent and here again the slow wave variant is the outstanding EEG abnormality. Penfield's automatisms and psychical seizures are clinically similar.

We endeavour in this paper to describe a syndrome which incorporates the clinical findings in the above episodes as well as additional clinical features, all associated with the "psychomotor variant" in the EEG. The effect of various medications on patients showing this composite syndrome will be reported.

In 1942 we commenced observing the EEG findings of apparent psychoneurotic patients complaining of periods of altered states of consciousness, *e.g.*, trance-like states, feelings of unreality and finally so-called fainting spells. The EEG findings on this group showed an occasional half- and/or double alpha variant as described by Goodwin(3). Because of this finding, anti-convulsive medication was considered and in view of the work of Merritt and Putnam (4, 5) with sodium diphenyl hydantoinate

(dilantin sodium) this drug was employed in our cases. Dilantin sodium has been found to be most efficacious in the treatment of psychomotor and grand mal epilepsy and of little value in the treatment of petit mal attacks. On placing these patients on dilantin sodium, the psychoneurotic features were definitely reduced. At this point, our interest was stimulated to go farther afield. Patients showing emotional instability, headaches and vasomotor upsets, particularly migraine, were subjected to EEG examination. In this group also, alpha variants were found in the recordings. One hundred and thirty cases, showing psychoneurotic and other clinical features described above and exhibiting in the EEG traces or more of a variant of the alpha activity, were collected up to February 1947. This series was made up of patients from the indoor medical and out-patient neurological services of the Toronto Western Hospital, the indoor and out-patient departments of the Toronto Psychiatric Hospital, as well as private neurological patients referred to the electroencephalographic department of either of the above hospitals. All patients in this series, on neurological examination, were essentially negative. The period of observation extended from approximately four months to four years. The patients ranged in age from 3 to 81 years—55% were females and 45% males.

A card was compiled, setting out in detail the symptomatology of the group (Fig. 1). In categorizing the complaints of the patient it will be seen that various headings, and the descriptive terms, are not necessarily an actual verbatim report. Indeed the patient's description may cloud the etiology, *e.g.*, he may complain of staggering but cannot inform the examiner whether it is a dysfunction of the vestibular apparatus or an episode of impaired consciousness. Therefore a careful inquiry was made into all complaints before categorizing them. The heading '*cranialgia*' is self-explanatory except

<sup>1</sup> Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

From the department of psychiatry, University of Toronto and the department of medicine, Toronto Western Hospital. A portion of this work was made possible by a grant from the Rockefeller Foundation. This research has been supervised by Professor Clarence B. Farrar, and Dr. Herbert K. Detweiler, physician-in chief of the Toronto Western Hospital.

The author wishes to acknowledge with thanks the generous supply of dilantin sodium placebo capsules by the Parke Davis Company for use in the control patients in this investigation.

Form 387

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Name ..... M. F. Age.....

E.E.G. No..... Ward..... Date.....

Cranialgia: Severe. Mild. Diffuse. Localized..... Pressure. Pain. Frequency.....Emotional Instability: Irritability. Rages. Fears. Panic States. Frequency.....Vasomotor Instability: Sweating. Tremors. Dizziness. Weakness. Frequency.....Impaired Consciousness: Auditory. Visual. Feelings of Unreality.Trance States. Fugues. Compulsive Behaviour. Frequency.....Loss of Consciousness (describe) .....Twitching. Frequency.....Other Personality Disorders (describe) .....Episodic. Continuous. Frequency.....Epilepsy: Standard Types.Ictiopathic. Grand Mal. Petit Mal. Jacksonian. Frequency.....Other Clinical Manifestations:.....

.....

.....

DiagnosisE.E.G. FindingsMedication and Progress

probably for the term 'pressure' which is to cover the frequent complaint of pressure from within or without the cranium. '*Emotional and vasomotor instability*' needs no explanation. Under '*impaired consciousness*' we have grouped auditory and visual hallucinations or illusions. The patient may complain of queer feelings, at times stating that things appear unreal. In the 'trance-like states' it is not uncommon for the patient to explain that he can hear what goes on but cannot speak or move and occasionally he is unable to hear but merely observes his environment without being able to contribute actively to it. 'Compulsive behaviour' can best be described by this example: a patient who had sufficient insight to appreciate that

this abnormality. Finally, the term '*other clinical manifestations*' was reserved for any clinical features that could not be categorized under the above headings.

As the series increased, the association between typical epilepsy and the syndrome under investigation became increasingly obvious. This is shown in the 130 cases to be described. Although chosen primarily because of the presence of one or more of the tabulated complaints, it was found that approximately  $\frac{1}{3}$  of the series suffered from typical epilepsy. Because of this relationship, we have termed the syndrome an epileptiform syndrome.

The results on placing the 130 patients on various medications is set out in Table I.

TABLE I

## RESULTS OF MEDICATION

(186 treatment observations on 130 patients, including those showing grand mal or petit mal features)

Medication	Markedly improved	Improved	% Markedly improved or improved	Unimproved	Total
Dilantin sodium .....	38 (70%)	11 (20%)	90%	6 (10%)	55
Dilantin sodium plus phenobarbital...	47 (72%)	16 (25%)	97%	2 (3%)	65
Phenobarbital .....	1 (3%)	10 (29%)	32%	24 (68%)	35
Dilantin sodium plus sodium amytal..	3 (33%)	6 (67%)	100%	0 (0%)	9
Sodium amytal .....	0 (0%)	8 (36%)	36%	14 (64%)	22
Total					186

she was not mentally well, telephoned her mother previous to doing some Christmas shopping. Her mother made light of her apprehension and the patient followed her mother's advice to complete her shopping. Visiting a store for this purpose, she felt compelled to steal trifling articles, fully aware that she was being followed by the store detective, but being unable to alter her behaviour. The term '*loss of consciousness*' covers any duration of unconsciousness and the patient often describes it as fainting spells. It is useful to note the duration of such periods and to ascertain if the patient is immobile during this period of unconsciousness. In '*other personality disorders*' which are episodic we have seen episodes of anxiety, psychomotor inertia, as well as frank psychotic periods. The heading '*epilepsy*' was added when we found that a portion of the cases in our series suffered from

Markedly improved indicates that there is at most only an occasional disabling episode and this never producing unconsciousness. Improved indicates that the episodes are reduced in number but not necessarily in degree. The table shows the responses of 130 patients, but as numerous patients were moved from one therapeutic routine to another, 186 observations appear. The outstanding feature is that the groups receiving dilantin sodium alone or in combination, showed the greatest improvement. Using dilantin sodium alone, 49 of 55 cases, or 90%, were markedly improved or improved. While this figure rose to 97% on adding phenobarbital, this increase is not statistically significant. Those placed on phenobarbital or sodium amytal alone, in the majority of cases, were unimproved; in fact only 1 case out of 35, or 3%, was markedly improved on phenobarbital. This confirms Gibbs *et al.* (6)

who have reported the production of psychomotor attacks by the use of this drug. There was no marked improvement in 22 cases placed on sodium amytal alone. In the case of dilantin sodium medication alone, there were 6 failures (10%). One case was intolerant to dilantin sodium, not allowing adequate dosage (the drug was discontinued after 3 weeks on 2 grs. dosage daily). The second case was subsequently found at operation to have cortical gliosis in the frontoparietal area. The third case became markedly improved on adding to the dilantin sodium, sodium amytal grs. 1 t.i.d. to allay a

In Table II the response on various medications of 85 patients of the previous Table I showing no evidence of grand mal or petit mal components, is recorded. The only significant difference in the results in Tables I and II is the decrease in benefit using phenobarbital alone. In those cases of the epileptiform syndrome showing no grand mal or petit mal components, not one case was markedly improved on phenobarbital. Those showing improvement of any degree on phenobarbital had fallen from 32% in Table I (grand mal and petit mal components present) to 19% in Table II (no

TABLE II

## RESULTS OF MEDICATION

(121 treatment observations on 85 patients, without grand mal or petit mal features)

Medication	Markedly improved	Improved	% Markedly improved or improved	Unimproved	Total
Dilantin sodium .....	33 (68%)	10 (21%)	89%	5 (11%)	48
Dilantin sodium plus phenobarbital...	17 (65%)	7 (27%)	92%	2 (8%)	26
Phenobarbital .....	0 (0%)	3 (19%)	19%	13 (81%)	16
Dilantin sodium plus sodium amytal..	3 (33%)	6 (67%)	100%	0 (0%)	9
Sodium amytal .....	0 (0%)	8 (36%)	36%	14 (64%)	22

Total 121

TABLE III

## EFFECT OF DISCONTINUING SODIUM DIPHENYL HYDANTOINATE (DILANTIN SODIUM)

Method of discontinuance	No. of Cases	No. of clinical relapses	Percentage	Effect of resuming dilantin sodium
Substituted placebos. ....	10	8	80	Recovery 100%
Stopped drug for one or other reason, without substitution by other medication.....	10	10	100	Recovery 100%

marked anxiety feature present. Trial of this patient on sodium amytal alone resulted in an obvious relapse with a complete recovery on addition of dilantin sodium grs. ½ q.i.d. The fourth failure was a patient who subsequently complained of a sensory epileptiform attack involving the left upper limb as well as severe bouts of vomiting. Her gastric test meal between attacks showed an extreme fasting gastric hyperacidity. The fifth case was a psychopath and his history of "dizzy spells" could not be confirmed—no one ever saw him during one of the alleged attacks. The final case did not, at any time, complain of genuine impaired consciousness or any other feature of the syndrome, but was included due to the complaint of "fuzziness" which subsequently could not be adequately assessed.

grand mal or petit mal components present). The anti-convulsant properties of phenobarbital probably account for this variation. Sodium amytal, a non anti-convulsant drug, used alone did not bring about marked improvement in a single case. Its effect was identical in both groups, namely 36% of cases were improved.

In Table III the results of withdrawing dilantin sodium or substituting an identical placebo capsule are shown. Eighty percent of the cases on placebo relapsed within 10 days and recovered within one week on resuming dilantin sodium. One hundred percent of the cases that for one reason or another stopped dilantin sodium, relapsed within two weeks and recovered on resuming this drug within one week. The majority of patients showed a progressive improvement



as the dilantin dosage was increased and the phenobarbital or sodium amytal medication decreased. A number of the patients categorized as improved are still under observation for the purpose of determining the most appropriate dosage of dilantin sodium. Some of these may be transferred to the markedly improved group in the near future.

The average effective dilantin sodium dosage for the various complaints, exclusive of grand mal epilepsy, appeared to be approximately 3 grains per day. The daily dose varied from approximately  $1\frac{1}{2}$  to 9 grains. The average effective dilantin-phenobarbital dosage for the cases showing grand mal components was found to be 3.0 grains of dilantin sodium with 1.5 grains of phenobarbital, a ratio of 2 to 1. The dilantin sodium dose varied from 2 to 6 grains daily and the phenobarbital dose from  $\frac{1}{2}$  to  $4\frac{1}{2}$  grains daily.

The following are example cases from our series showing the epileptiform syndrome.

The first was a middle aged woman who had been seen by a number of physicians and very thoroughly investigated in one of our general hospitals, for a bizarre complaint consisting of olfactory hallucinations. She insisted that there was a smell of decaying vegetables or other nauseating odours to the point of producing vomiting. Neurological examination was completely negative, in fact the physical examination showed no significant abnormality. An air encephalogram was negative and spinal fluid examination was also negative. It was felt by one of the physicians who examined her that she was suffering from hysteria. At the time the patient came under our care, she was acutely dehydrated and suffered occasional periods of unconsciousness which she termed "fainting spells." Because of this complaint an EEG was done and showed an obvious psychomotor variant. The patient was placed on adequate dilantin sodium medication and made a complete recovery over a period of approximately three weeks. She was referred to the out-patient department of the Toronto Western Hospital and it is interesting to note that she discontinued her medication, explaining that she did not think it was necessary to carry out the routine as it was "a new-fangled idea of a young doctor." Within a week she had relapsed so that her uncinoid fits recurred and she very meekly reported to the out-patient department. She has continued her medication religiously without return of the uncinoid features but manifesting a mild psychoneurosis not uncommonly seen in obviously insecure spinsters. We fully appreciate that a temporal lobe lesion has not been completely ruled out in this patient and she is being closely followed in our out-patient neurological department.

The next patient was a young woman who had

suffered from migraine from the age of seven, a period of seventeen years. There were the usual prodromal signs and the headache, once established, seldom disappeared in less than 24 hours. It was so disabling, invariably producing vomiting, that it required spending at least two, or often three or four days a week in bed. It was a continual fight between attacks to re-establish adequately the fluid balance of the body. In this case the history of feeling faint at times suggested an EEG investigation. To our surprise an alpha variant was present. We had come along far enough in the observations on this series to appreciate the need of observing the cases showing this EEG abnormality on other than dilantin therapy from the beginning. The patient was brought to hospital at the start of one of her migraine attacks and placed on sodium amytal, grains 3 t.i.d., p.c. and h.s. without any significant improvement, this attack terminating spontaneously in two or three days. The patient was continued on sodium amytal but the headaches recurred as usual. Dilantin therapy was substituted for sodium amytal and over a period of three weeks the patient experienced what to her was a remarkable improvement, and at the end of six weeks her migraine attacks had disappeared, being replaced by an occasional trance-like state which existed for a "few minutes." Her dilantin dosage was increased and for the past six months she has had no disabling cranialgia and there has not been a single bout of vomiting.

The next and final case was that of a young man who had been very active in radar work in the army and on returning to civilian activity complained of being anxious and fatigued, a complaint that suggests on the surface a psychoneurotic syndrome. On further interrogation, the patient made the interesting statement that at times he felt "queer," being unable to appreciate fully conversation that was going on about him and not being able to carry out a simple planned routine. This state would last for ten minutes or so and afterwards he would feel quite fatigued. It was because of this last feature of the history that an EEG was done and again an obvious psychomotor variant was seen. As in the previous case, we were very anxious to see his response to sodium amytal because of the anxiety features, and there was only a slight improvement brought about by this medication. To avoid as much as possible the suggestion factor, the patient was told that he was to be changed from his medication (sodium amytal) to another medication that probably would not be as beneficial but in the interests of medical science we pleaded that he would agree to this plan. This he did and to his surprise found that the trance-like states disappeared and his anxiety and fatigue markedly improved. He has remained in such an improved state for the past seven months.

## DISCUSSION

On reviewing our series, it becomes obvious that our epileptiform syndrome can extend from cranialgia, sweating, tremors, diz-

ziness, or weakness, episodic emotional upsets, slight changes in consciousness, to the more acute stages of impaired consciousness in which we have hallucinations, feelings of unreality, trance-like states, fugues and finally automatic or compulsive behaviour or complete loss of consciousness. In several of our cases, showing the above syndrome, we have observed poorly localized twitchings and can conceive of this abnormality progressing to the point of a typical grand mal convulsion. Such a progression is seen frequently during insulin shock therapy and begins with purposeless twitchings. In a similar manner, episodic emotional instability can progress to the point of a psychotic disorder and a state simulating a true manic reaction appear. In this panorama it is quite impossible to define clinically where any one type of epilepsy begins and ends or when it is combined with the other epilepsies. In our opinion, we must change our conception of epilepsy from the cut and dried differentiation of the three major types and consider the real possibility that the clinical features merely show the predominant manifestations of the disorder. The EEG must be relied upon for the more accurate assessment of the epileptic components.

Gower(7) in 1907 speaks of the borderland of epilepsy in which "faints", vagal and vaso-vagal attacks, vertigo, migraine and "some sleep symptoms" (night terrors, half-waking, narcolepsy etc.) are likened to epilepsy. He states they are like it but not of it. Both Gower(7) and Wilson(8) classified all types of "convulsions," other than grand and petit mal, as epileptic equivalents. Pugh(9) suggested—"Epileptic equivalents are expressions of convulsive disorders characterized by bizarre motor activity, sensory hallucinations and illusions or acute manifestations involving the autonomic nervous system. There is associated amnesia for the entire episode but no loss of consciousness nor the usual stigmata of a convulsive attack." The bizarre motor activity in 11 of his 18 cases in this series, took the form of destructive attacks on property or person, *i.e.*, abnormal behaviour episodes. Thirty-three of 42 cases of epileptic equivalents showed an abnormal EEG, 16% showed 6 per second flat-topped waves. Putnam and

Merritt(10) in 1941 discussed a group of cases of "epilepsy" in which periods of dullness, mental retardation, apathy and mild confusion occurred, in addition to definite attacks of typical grand mal, petit mal and so-called psychomotor types. Slow square-topped waves were a common occurrence in the EEGs.

Penfield(11) is able to produce dream or trance-like states by stimulation of the temporal lobes without the patient completely losing consciousness. Penfield terms these or similar seizures "psychical."

Lennox(12) has pointed out the generic relationship of epilepsy and migraine and here again it appears like it but not of it. Walker(13) discusses behaviour problems in children and reports that in 9 cases showing accompanying cerebral dysrhythmia (not clearly described as to type) improvement resulted from the use of dilantin sodium.

Thus a number of the symptoms in our epileptiform syndrome have been related previously to epilepsy and some of the more recent investigators even remarked on the common finding of slow square-topped wave formation in the EEGs of their cases. By using a variant in the EEG as a common denominator, we have been able to include all of the above unusual clinical features in our epileptiform syndrome, along with the more typical clinical abnormalities generally recognized as psychomotor attacks, psychic variants or equivalents, or psychical seizure.

There is a multitude of references in the literature extolling the many virtues of dilantin sodium. It has proven its value in the control of typical psychomotor and grand mal epilepsy. An article by Shapera(14) reports a significant clinical improvement in two cases of acute migraine on this therapy, a finding we have confirmed. It has even been reported as relieving such diverse clinical conditions as bronchial asthma and abdominal pain. One feels on first noting the wide variety of clinical pictures which are reportedly benefited by this drug, a definite skepticism of the real value of this therapeutic agent. However, we have described a similar diversity of symptoms contributing to a syndrome which is improved selectively by the use of this medication. Such a finding has significantly reduced our skepticism.

In one-third of our series the epileptiform syndrome included typical epilepsy. Furthermore, 5 cases without recognizable epilepsy at the commencement of treatment, subsequently developed grand mal or periods of unconsciousness while under observation. These findings, combined with the common selective response to sodium diphenyl hydantoinate, and the common EEG abnormalities described by Goodwin (3), lead us to the belief that epilepsy has a much wider variety of clinical manifestations than has been hitherto recognized.

The concept of psychomotor epilepsy outlined by Gibbs *et al.* (1) connotes a motor component. In our epileptiform syndrome such manifestations may or may not occur. Psychomotor thus is too restrictive a term for this syndrome. We are at present unable to suggest a more descriptive term than "epileptiform syndrome."

As in typical epilepsy the syndrome appears to be a manifestation of a cortical dysrhythmia and in our series has been predominantly of the idiopathic type. This idiopathic group will no doubt diminish as research uncovers organic abnormalities in the brain which we cannot at present discern. It is conceivable, for example, that localization of metabolic disorders in brain tissue, however slight, might furnish foci for electro-cortical or sub-cortical dysfunction with its attendant clinical manifestations.

The synergistic action of sodium diphenyl hydantoinate and phenobarbital observed by us in the treatment of combined epilepsy is a confirmation of the finding of Cohen *et al.* (15) in 1940. This synergistic action was not found except when grand mal components were present.

### CONCLUSION

One hundred and thirty cases presenting a syndrome including cranialgia, emotional instability, vasomotor instability, impaired consciousness, loss of consciousness, personality disorders and epilepsy, have been found to have a common EEG component, namely half and double alpha variants. Ninety-five percent of the cases had impaired states of

consciousness and a significant proportion grand mal epileptic features. The series has shown a selective response to trials on several medications, improvement occurring in 90% of patients placed on dilantin sodium. Phenobarbital or sodium amytal were of little benefit. It is suggested this syndrome is more inclusive than those conditions variously described as psychomotor attacks, psychic variants or equivalents, or psychical seizures, and warrants the term epileptiform syndrome. The syndrome enlarges our conception of the limits of epilepsy.

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## FIVE YEARS AFTER SHOCK THERAPY

### A PRELIMINARY REPORT<sup>1</sup>

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Considerable literature has accumulated on the subject of shock therapy but there are many questions that remain unanswered. We are attempting a critical evaluation of the shock therapies, that is, the insulin coma method, the metrazol convulsion method, and the electroshock method, with the hope of providing answers to some of the following questions:

1. Does a follow-up study of 5 years after insulin shock therapy indicate that it was only a special method of treatment and now not worth pursuing further, or do the results after five years justify its continued use in the various forms of schizophrenia?

2. How do the results of shock treatment compare with spontaneous recoveries in an adequate untreated control group?

3. How does metrazol compare with insulin as a therapeutic agent in schizophrenia?

4. Is the growing popularity and preference of electroshock based on its relative simplicity of application, or do the results and follow-up studies indicate that it is the most efficient?

5. What type of shock therapy is the most efficient for the various psychiatric disorders?

6. How do the relapses following shock therapy compare with relapses in an untreated control group, and are relapses expected or are they frequently to be expected following shock therapy?

This report embodies a statistical review of the results of shock treatment, their comparison with spontaneous recoveries in a control group and the results of our follow-up study to date. This series comprises a total of 457 patients treated with insulin, metrazol

and electroshock in the period from September 1937 through July 1941. There were 85 males and 106 females treated with insulin; 131 males and 111 females treated with metrazol, and 24 females treated with electroshock, making a total of 191 treated with insulin; 242 treated with metrazol; and 24 treated with electroshock. Forty-five patients were not included in this series because complications necessitated interruption of treatment. There have been no fatalities.

In evaluating results of treatment, only patients improved sufficiently to leave the hospital on parole were considered. For controls, we endeavored to match the treated patients with regard to age, sex and diagnosis, with patients admitted to the hospital during the years 1935 and 1936. The majority of patients admitted during the treatment years received some type of shock therapy; most of those not treated were found to be physically disqualified for shock therapy. Our untreated or control group comprised 289 patients; 170 males and 119 females. Of this group 103 or 35.6% were paroled.

Insulin treated: 191 patients with 102 or 53.4% paroled.

Metrazol treated: 242 patients with 91 or 37.6% paroled.

Electroshock treated: 24 patients with 11 or 45.8% paroled.

Total paroled: 204 or 44.6% as compared with 35.6% in the untreated control group.

#### *By Diagnostic Groups:*

##### *Schizophrenia*

Insulin shock treated:

Schizophrenia, catatonic type: 60 patients; 39 or 65% paroled.

Schizophrenia, paranoid type: 52 patients; 32 or 61.5% paroled.

Schizophrenia, hebephrenic type: 11 patients; 1 or 9% paroled.

All other types of schizophrenia: 61 patients; 24 or 39.3% paroled.

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The authors wish to express their appreciation to Miss Kathryn Eber, psychiatric social worker in the Wayne County General Hospital, for her assistance in securing the data for the follow-up study.

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**Metrazol treated group:**

Schizophrenia, catatonic type; 69 patients; 25 or 36.2% paroled.

Schizophrenia, paranoid type; 46 patients; 18 or 39% paroled.

Schizophrenia, hebephrenic type; 25 patients; 5 or 20% paroled.

All other types of schizophrenia; 62 patients; 20 or 32.2% paroled.

**Control group:**

Schizophrenia, catatonic type; 71 patients; 32 or 45% paroled.

Schizophrenia, paranoid type; 73 patients; 12 or 16.4% paroled.

Schizophrenia, hebephrenic type; 47 patients; 11 or 23.4% paroled.

All other types of schizophrenia: 58 patients; 25 or 43.1% paroled.

**Manic-depressive psychosis**

Metrazol treated: 19 patients; 9 or 47.3% paroled.

Control group: 20 patients; 11 or 55% paroled.

**Involucional melancholia**

Metrazol treated: 13 patients; 9 or 69.2% paroled.

Control group: 11 patients; 8 or 72.2% paroled.

Electroshock treated: 2 patients with a diagnosis of agitated depression, both paroled. 1 with a diagnosis of involucional melancholia was paroled.

The results show that the insulin coma method is more effective than convulsive therapy in schizophrenia, particularly in the catatonic and paranoid types and substantiates the reports by Ross,<sup>4</sup> *et al.*, of the New York State Hospital system.

In 1939<sup>5</sup> we emphasized that psychological factors are of considerable importance throughout treatment. The general therapeutic setting in the insulin coma method is more intensive and may be responsible for

establishing a transference more readily than the less intensive convulsion methods.

**By Age Groups:****Insulin treated:**

Under 25 years of age: 75 patients; 41 or 54.6% paroled.

25 to 34 years of age: 109 patients; 47 or 43.1% paroled.

35 and over: 28 patients; 16 or 57.1% paroled.

**Metrazol treated:**

Under 25 years of age: 72 patients; 45 or 48.6% paroled.

25 to 34 years of age: 108 patients; 38 or 35.1% paroled.

35 and over: 68 patients treated; 30 or 44.1% paroled.

**Control group:**

Under 25 years of age: 67 patients; 28 or 41.7% paroled.

25 to 34 years of age: 113 patients; 45 or 39.8% paroled.

35 and over: 109 patients; 24 or 22% paroled.

The parole rate of treated patients was found to be 9% higher than the parole rate of the untreated group. This, however, is not a true over-all picture of the treated group. In analyzing our data we found that the untreated patient spent an average of 20.4 months in the hospital before parole. The average for treated patients was 13 months despite the fact that a number of these patients were in the hospital for 8 and 9 years before treatment. Of the 204 treated patients who were paroled, 154 received treatment within one year after admission. The average period of hospitalization for this group was 6.5 months as compared to 20.4 months for the untreated control group. In the control group 47 patients were paroled within one year after admission. This results in a parole rate of 16.2% as compared to 56.6% for the group treated and paroled within one year after admission to the hospital. Treatment of this group resulted in the saving of 13.9 months of hospitalization per patient. This is a matter of considerable importance particularly from an administrative point of view, since this saving in time projected for a group of 100 patients would

<sup>4</sup> Ross, Jno. R.: The pharmacological shock treatment of schizophrenia. *Am. J. Psychiat.*, 95: 769-779, 1939.

<sup>5</sup> Lipschutz, L. S., et al.: Evaluation of Therapeutic Factors in Pharmacologic Shock. *Am. J. Psychiat.*, 96: 347-360, 1939.

equal 42,270 patient days; the equivalent of adding 118 beds to the institution's capacity.

Although this follow-up study, started in August 1946, includes patients who were treated not less than 5 years ago, it should be pointed out that for a number of the treated patients the follow-up study is as long as 8½ years. For the control group the maximum period of follow-up is 10 years.

Our preliminary review of patients paroled reveals that 39 or 37.8% of the control group relapsed. In the treated group 111 of the 204 or 54.4% relapsed.

*According to type of treatment:*

Insulin: 64 or 62.7% relapsed.  
Metrazol: 43 or 47.2% relapsed.  
Electroshock: 4 or 36.3% relapsed.

*Reparoled:*

Control group: 15 or 38.4% reparoled.  
Treated group: 34 or 30.6% reparoled.  
Insulin treated: 18 or 28.1% reparoled.  
Metrazol treated: 15 or 34.8% reparoled.  
Electroshock treated: 1 or 25% reparoled.

*Out of the hospital at time of study:*

Control group: 79 or 23.8%.  
Treated group: 127 or 27.8%.  
Insulin treated: 56 or 29.3%.  
Metrazol treated: 63 or 26%.  
Electroshock treated: 8 or 33.3%.

Despite the relatively large number of relapses, the insulin treated group still shows a higher percentage of patients out of the hospital than either the metrazol treated or control group. The over-all percentage of patients out of the hospital at time of study was 4% higher for the treated than for the control group.

In this follow-up study we are concerned mainly with the following questions: What was the status of the patients who were at home at the time of study as to self-support, family and social relations, and how do the treated patients compare in this respect with the untreated control group? In order to obtain as accurate an interpretation as possible of the findings it was decided to make a study of the patients' adjustment prior to illness. This study included such data as mental history, educational, occupational, social and familial adjustment, general make-up and attitudes. Similar information was gathered for the period from parole to date of study. In addition, an attempt was made to obtain the reactions of the patient and family to the hospital and to the treatment received. Preliminary reports of our follow-up study of patients who were on parole as of August 1, 1946, indicate that 13 treated patients are making an adequate occupational, social and familial adjustment. One patient is dead and one patient is under the care of a private psychiatrist. Four patients from the control group are at present hospitalized for recurrences of their psychoses. Three are making an adjustment outside of the hospital.

This statistical study 5 years after shock treatment justifies the following conclusions:

1. A higher percentage (9%) of remissions may be expected following shock therapy than when remission is permitted to occur spontaneously.
2. The percentage of patients on parole after 5 years is slightly higher (4%) for the treated than for the control group.
3. This study indicates that the insulin coma method is more effectual than convulsive therapy in schizophrenia, particularly in the catatonic and paranoid types.
4. The growing popularity and preference of electroshock in the treatment of schizophrenia is apparently based on its relative

STATISTICAL SUMMARY

	No. of patients	Paroled	Relapsed	Re-Paroled	On parole at time of study	Average period of hospitalization
Control group . . . .	289	103 (35.6%)	39 (37.8%)	15 (38.4%)	79 (23.8%)	20.4 mos.
Treated group . . . .	457	204 (44.6%)	111 (54.4%)	34 (30.6%)	127 (27.8%)	} 13 mos.
Insulin . . . . .	191	102 (53.4%)	64 (62.7%)	18 (28.1%)	56 (29.3%)	
Metrazol . . . . .	242	91 (37.6%)	43 (47.2%)	15 (34.8%)	63 (26%)	
Electro-shock . . .	24	11 (45.8%)	4 (36.3%)	1 (25%)	8 (33.3%)	

simplicity of application and lower incidence of complications rather than any actually established therapeutic superiority to other methods. In the treatment of the affective psychoses and the depressions it was found to be more effective than either insulin or metrazol.

5. Relapses following shock therapy are not exceptions and may be expected to occur at least as frequently as in untreated patients.

6. Preliminary follow-up reports on a relatively small number of patients indicate

that the treated patients have made a more stable adjustment out of the hospital than the untreated patients of the control group.

7. When treatment is given during the first year of hospital residence, a saving of 422 hospital days per patient is obtained, and remission permitting parole will occur in one-third the time required for spontaneous remission. The practical implications are obvious; calculated for units of 100 treatable patients the bed capacity for this type of patient is more than doubled.

# ELECTROENCEPHALOGRAPHIC STUDIES IN IDIOPATHIC EPILEPSY, IDIOPATHIC SYNCOPE AND RELATED DISORDERS IN A U. S. NAVAL HOSPITAL<sup>1</sup>

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## PART I. PHYSIOLOGICAL AND PSYCHOLOGICAL MECHANISMS OF SYNCOPE

### PURPOSE AND INTRODUCTORY REMARKS

An attempt has been made in the following analysis to evaluate certain clinical and fundamental data which might aid in the differential diagnosis of an idiopathic convulsive episode and the unexplained syncopal attacks which are so frequently seen in various psychoneurotic complexes and in personality disorders. In order to accomplish this, careful electroencephalographic examination was combined with intense clinical study especially in a group of cases whose cardinal symptoms were those of syncope.

To differentiate the first idiopathic convulsive seizure of a mild nature and a severe syncopal episode with "twitchings" of the musculature in a young adult is in many instances a baffling problem. Further difficulties arise when the differential diagnosis between pyknoleptic and akinetic types of petit mal epilepsy and an unexplained "fainting attack" is attempted especially when the individual is under 20 years of age.

### POSSIBLE PHYSIOLOGICAL AND PSYCHOLOGICAL MECHANISMS OF SYNCOPE

Apparently there are physiological and psychological forces at play to account for the common symptom of syncope. From clinical observation it would appear that cerebral anoxia or anoxemia was one of the most frequent reasons for this symptom. A careful history obtained from these cases often elicited the following:

#### 1. The patient complained of sudden

blurring and blacking out of vision just prior to his losing consciousness.

2. Frequently the patient would state that he "blackened out" but did not lose consciousness.

3. The patient knew when he was "blackening out" that he might fall and could avoid this by "catching on" to an object or sitting down.

4. The attack almost invariably disappeared within a few seconds.

5. Repeated observations disclosed "twitchings" of the musculature as the patient recovered consciousness.

It has become almost axiomatic to speak of a "faint" as due to lack of blood flow to the head. The practical procedure of laying the patient in the prone position or bending the head between the knees has been accepted for years. It is possible that "fainting" due to sudden lack of blood flow to the head is much more common in certain types of psychoneuroses and personality disorders than is generally accepted and that the physiological explanations for sudden cerebral anoxia or anoxemia may be multiple but usually give the same "chain" of symptoms.

Thus far carotid sinus syncope and "black-out studies" in the field of aviation have received the most study(1, 2, 3). Previous investigation by the author and co-workers in studies of acute arrest of circulation in man(4) revealed that approximately 95 c.c. of blood is present in the head at any one time. In 90% of human subjects this volume of blood when fully saturated with oxygen can maintain consciousness for only 7 seconds or less. The calculations of the same workers(4) reveal that the human brain requires about 1.56 c.c. of oxygen per second. There are about 15.44 c.c. of oxygen present in 95 c.c. of blood when fully saturated. Apparently all the oxygen is not used up at the time that the conscious state is lost because Lennox and Gibbs(5) have shown that unconsciousness results when the venous blood

<sup>1</sup> We wish to take this opportunity to express our thanks to Captain George Raines (M. C.) U. S. N., Captain S. M. Smith (M. C.) U. S. N. R., and other members of the neuro-psychiatric staff who were at the U. S. Naval Hospital, Portsmouth, Va., during the period between January 1944 to January 1946 for their splendid cooperation in making this work possible.

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falls below a saturation level of 24%. Since the cardiac output per beat is between 60 c.c. and 75 c.c. and since about one-third of this volume goes to the head per beat it would take about 4 heart beats to pump a volume of blood equal to that in the head at any one time. A transient lack of, or improper, blood supply to the brain can therefore cause very drastic symptoms.

The following symptoms can be produced at will in 90% of young adults when cerebral circulation is arrested with the KRA apparatus(4):

1. Sudden blurring and "blacking out" of vision in 5-7 seconds.
2. Fixation of the eye-balls in the midline (5-7 seconds).
3. Sudden loss of consciousness with turning up of the eyeballs (6-8 seconds). (The state of unconsciousness will persist as long as the apparatus is left on.)
4. Upon release of the apparatus (usually at the time when consciousness is lost) mild tonic and clonic contractions of the musculature which last for up to 10 seconds could be referred to as "twitchings" of the musculature.
5. Recovery of consciousness (upon release of apparatus) in 5-15 seconds.
6. Paresthesias in various parts of the body which occur just as consciousness is lost or as it is regained.

It is interesting to note that the tonic and clonic contractions of the musculature occur only when *oxygen is restored* to the brain but that unconsciousness results when there is a sudden deprivation of oxygen to the brain. It should be noted that the above

symptoms occur in sequence only when there is brief arrest of circulation to the brain (usually 8-10 seconds). Prolonged application produces much more pronounced symptoms(4). Electroencephalographic studies by Baldes(4) have shown that slow waves (delta) begin appearing at the time of fixation of the eyes and just before consciousness is lost when the cerebral circulation is arrested in man. The EEG resumes a normal pattern within a few seconds after consciousness is regained.

It is not difficult to realize why the symptoms of syncope can occur so commonly especially in individuals with labile vasomotor systems. The symptoms of "black-out" "feeling faint," "dizziness," "blurring of vision" or "feeling that the heart has stopped" are frequent enough in certain cases of personality disorder and various psychoneurotic complexes to advance the mechanism of cerebral anoxemia as explained above as a possible etiological factor. Sudden changes in position, excessive fatigue, sudden emotional stress, hunger and the like may also be factors in the production of syncope. Many patients complained of "dizziness" and "seeing black" when suddenly changing from horizontal to vertical position.

#### DIFFERENTIAL DIAGNOSES BETWEEN SYNCOPE AND EPILEPSY

The following differentials are suggested between idiopathic convulsive disorder and a syncopal attack as seen in various types of personality disorders and psychoneurotic complexes:

#### EPILEPSY

1. Patient tends to minimize or conceal his symptoms.
2. Very sudden loss of consciousness or peculiar type of aura (smell, taste, sudden gastric pain, etc.).
3. Loss of consciousness with injury. Loss of consciousness lasting several minutes, hours or longer.
4. Severe tonic and clonic contractions of the musculature, cyanosis, tongue biting, etc.
5. Headache, drowsiness and tendency to sleep after attack.

#### "PSYCHOGENIC" SYNCOPE

1. Patient tends to exaggerate or non-minimize his "fainting" or "blackout" spells.
2. Sudden feeling of "giddiness" and "dizziness" followed by "blacking out of vision." Sometimes referred to as "blind staggers." Positive and negative scotoma.
3. Loss of consciousness sudden but usually does not last longer than 15 seconds. Patient seldom falls or injures himself. The unconsciousness is usually preceded by patient "seeing black."
4. Mild tonic and clonic contractions of the musculature for a few seconds. No tongue biting, cyanosis or incontinence. Skin becomes cold and "clammy." Patient appears pale.
5. Patient recovers completely within a few minutes. Rather euphoric and feels relatively well. No headache or tendency to sleep.

It is also possible that cerebral anoxemia may be one of the exiting factors in the production of a grand mal attack and also that marked emotional instability predisposes to the convulsive seizure. This latter may be a factor in the epileptic who has developed superimposed operational and combat fatigue. Sudden emotional stress or cerebral anoxemia could bring on a seizure in an epileptic or an individual with inherent convulsive tendencies but the same stimuli would bring on only an attack of "syncope" in a psychogenic type of disorder.

#### TYPICAL CASE STUDIES

The following cases illustrate the preceding discussion. Cases I and II and Figs. 1 and 2 illustrate 2 cases discharged from the Navy with the diagnosis of epilepsy; Case III is a typical history of an individual admitted to the hospital with a diagnosis of a possible convulsive disorder and discharged from the service with the diagnosis of personality disorder.

CASE I.—This patient is a seaman first class, V-6, U. S. Naval Reserve, 19 years of age with 10 months and 7 days active duty prior to his present admission to the sicklist. This patient was admitted to the sicklist aboard ship on 11 June 1945 with the diagnosis of epilepsy. He had been observed in an attack of unconsciousness during which his right cheek muscles began to quiver and following which he had tonic and clonic contractions of his musculature and foamed at the mouth. After recovering consciousness he appeared disoriented and very weak. On 21 July 1945 he was again observed in a convulsion with symptoms as described above. On 3 August 1945 he was transferred to the U. S. Naval Hospital at Oakland, California. At that activity an electroencephalographic examination performed on 7 August 1945 was found to be out of normal limits. On 22 August 1945 he was transferred to this hospital for further study arriving here on 3 September 1945.

On admission this emotionally unstable, irritable white male gave a good coherent history and tended to minimize his seizures. All physical, neurological and indicated laboratory examinations were normal except for repeated electroencephalographic examinations which revealed presumptive evidence of epilepsy. Psychiatric evaluation did not reveal any formal disorder of feeling or thinking. According to the patient's own accepted statements he had suffered two convulsive attacks since June, 1945. He stated that he suddenly lost consciousness and remembered no more until he awoke and found himself lying on the deck feeling drowsy and suffering from headache. Past history revealed that he had suffered from peculiar attacks since the age

of 13 during which the right side of his face suddenly began to twitch and his mind became "blank" for an instant. Military history revealed that 8 of his approximate 13 months of service had been sea duty but that he had been in no combat. After a period of observation during which he was not observed in any seizures while a patient at this hospital but because of his past history and repeatedly abnormal EEGs the diagnosis of epilepsy was retained as correct.

CASE II.—This patient is a seaman first class, V-6, U. S. Naval Reserve, 20 years of age with 2 years, 8 months and 1 day active duty prior to his present admission to the sicklist on 28 September 1945 at the U. S. Naval Training Station, Norfolk, Virginia with the diagnosis of epilepsy. According to his health record this patient was observed in a typical grand mal seizure during which he frothed at the mouth, had tonic and clonic contractions of his musculature, lacerated his tongue and scratched his face in falling to the deck. After recovering consciousness he appeared sleepy and dull. Prior to his attack it was noted that he had been typing and suddenly collapsed. He was transferred to this hospital on the same date.

On admission here this co-operative but rather dull white male of low average intelligence tended to minimize any past history of seizures. All physical, neurological and indicated laboratory examinations were negative except for electroencephalographic examinations which all disclosed presumptive evidence of epilepsy. Psychiatric evaluation did not disclose any evidence of a psychosis. According to the patient's own accepted statements he was told that he had his last attack on 28 September 1945 as described above. Past history substantiated by the report of a reliable social service agency on file at this hospital disclosed that he had suffered similar attacks as described above in 1941 and 1943. He first had seizures in the 7th grade but they gradually diminished in intensity until 1941. Military history revealed that 21 of his 41 months of service had been sea duty. During his stay in this hospital the patient was not observed in any seizures. After a period of observation because of the past history and observed seizures the diagnosis of epilepsy was retained as correct.

CASE III.—This patient is a seaman first class, V-6, U. S. Naval Reserve, (SV), 18 years of age with 5 months and 17 days active duty prior to his present admission to the sicklist. He was admitted to the sicklist at the Amphibious Training Base, Naval Operating Base, Camp Bradford, Norfolk, Virginia, on 17 November 1944 with diagnosis undetermined (epilepsy). According to his health record he gave a history of attacks of fainting over the past 8 years at irregular intervals which the neuropsychiatric consultant felt was deserving of further study and on 19 November 1944 he was transferred to this hospital for further disposition.

On admission this well-built 18-year-old white male stated that he has had "fainting spells" for the past 8 years. With a typical attack he suddenly sees grey, then black and remembers nothing more until

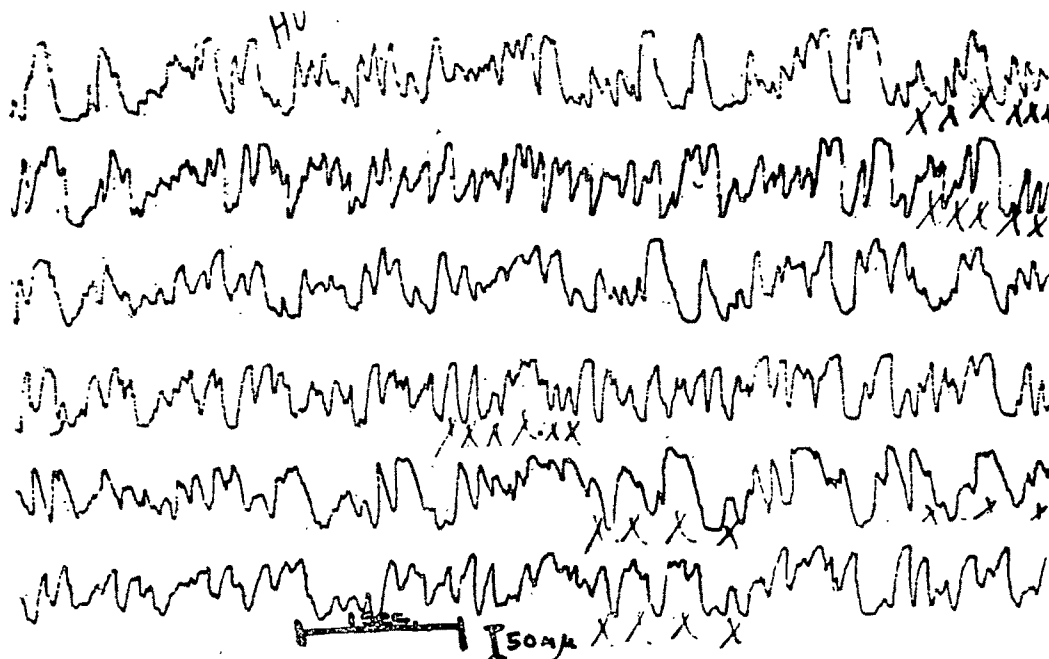


FIG. 1.—EEG: Tracing on patient who was discharged with epilepsy. Patient was 19 years of age at the time of his first Grand Mal Seizure in the Naval service which was observed in June, 1945. He gave a history of having "blank spells" since the age of 13. It was noted that his right cheek began to quiver before his seizure became generalized.

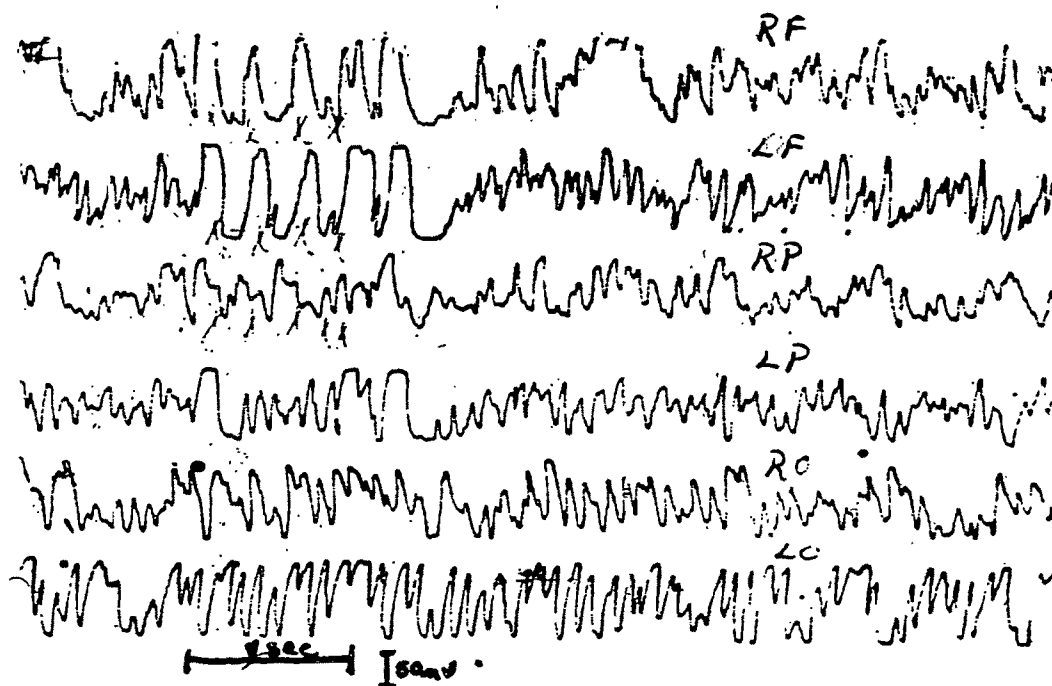


FIG. 2.—EEG. This is a tracing on a 20 year old white male who was discharged from the service with the diagnosis of epilepsy. Patient first had convulsion while in 7th grade. Patient observed in typical Grand Mal attack according to his Health Record, with tonic and clonic generalized convulsion, lacerate tongue and falling to the floor. This tracing prior to administration of urea.

he "wakes up." Each attack usually lasts only a few seconds and he has never bitten his tongue or soiled himself. Between these spells he feels nervous, shaky, cannot sleep, feels weak and has severe headaches. Psychiatric examination revealed that he was tense, anxious and worried about his condition. Past history disclosed that the above-mentioned symptoms were not new to him and had been present since childhood. All physical, neurological and laboratory tests were within normal limits except for a small scar at the tip of his sacrum which was the residual of the coccygeal cyst which was removed at this hospital in August of this year (1944). Military history revealed that of his approximate 5½ months of service he had already spent over 3½ months on the sicklist to the present time. After a period of observation during which 3 electroencephalographic examinations were found to be within normal limits and it became apparent that his "fainting spells" were only one of many somatic complaints the diagnosis of constitutional psychopathic state, inadequate personality was established.

## PART II. STATISTICAL REVIEW OF 469 CASES CORRELATED WITH ELECTROEN- CEPHALOGRAPHIC FINDINGS

### PURPOSE AND INTRODUCTORY REMARKS

The purpose of this study was to see if there was a correlation between the hospital admission diagnosis, the discharge diagnosis and the electroencephalographic findings in 469 patients admitted to a U. S. Naval Hospital with a possible diagnosis of a convulsive disorder.

In addition an analysis was made of 197 patients in this group in regard to the following: the number of these patients who had focal types of EEG, the number who gave a history of head injury, their age incidence, the number with observed grand mal seizures while in the service and the number observed in unconscious attacks without any other grand mal components. Special attention has been given to the frequent histories of syncope obtained from patients with other neuropsychiatric symptoms but who were neurologically negative, did not appear to have clear-cut evidence of a convulsive disorder and who were discharged with diagnoses other than that of epilepsy.

### ELECTROENCEPHALOGRAPHIC TECHNIQUE

The electrical activity of the right and left frontal, parietal and occipital cortex was recorded with a Grass 6-channel EEG. All

records were made with monopolar leads. The indifferent electrode was formed by interconnecting the two ear leads. Electrodes were applied to the scalp using the method described by Gibbs(6). Records were taken with the patient lying on a table in a shielded cage. Cortical activity was recorded for at least 10 minutes on each subject. Two minutes were allowed for hyperventilation and 2-3 minutes were allowed for recovery.

### METHOD OF INTERPRETATION

Gibbs classification of EEG records(7) was used with the following modifications: all paroxysmal tracings (petit mal, psychomotor, grand mal), spikes, S.2 and F.2 tracings were classified as abnormal. His F.1 and S.1 tracings were classified as having minimal abnormalities. An abnormal EEG interpretation in this article would therefore closely correspond to what Gibbs(8) interprets as "greatly abnormal"; those showing minimal abnormalities in this article closely correspond to his "slightly abnormal." All activity in the range of 8 to 13.5 per second was classified as normal. Brief runs of slow activity in the S.1 and S.2 groups that persisted for less than 15 seconds after cessation of 2 minutes hyperventilation were discounted if the tracing was normal before hyperventilation and if the abnormalities did not recur after hyperventilation. All tracings with paroxysmal types of waves were placed in the abnormal group irrespective of whether they occurred before or after hyperventilation. Abnormalities that occurred during the period of hyperventilation were not considered unless they were of the "spike and dome" type. It was the author's opinion that complicating artifacts due to the deep breathing, body movements, muscle potentials, etc., appeared so often as to make this unreliable especially in the interpretation of fast and "spiky" types of activity. In records of all tracings mention was made as to whether the abnormalities were focal or non-focal in type. The whole record was carefully reviewed and random wave counts made on at least 40 seconds of record before and after hyperventilation.

## MATERIAL

Of the 469 patients that were admitted with the diagnosis of epilepsy, syncope or a related convulsive disorder 206 were discharged with the diagnosis of epilepsy over a period from February 1, 1944 through September 1, 1945.

Of the total number of cases admitted to this hospital with the diagnosis of epilepsy or a related disorder and who were discharged from this hospital with the diagnosis of epilepsy or other indicated diagnoses as listed, all had complete neuropsychiatric work-ups, indicated laboratory studies and indicated consultations from other departments which included neurosurgical consultation. The majority had routine skull-rays, fasting sugars, lumbar puncture, complete blood studies, urine analysis and, when indicated, special tests such as the Rorschach in addition to their EEG examinations. Repeat EEG examinations were performed when indicated especially where the first tracing was of a borderline type or when the patient had been observed in a typical convulsive seizure but had a normal EEG with his first test. Of the discharged cases of epilepsy 197 were carefully analyzed in regard to age groups, type of seizure observed while in the service, the number who gave a history of head injury, the number who gave a history of focal seizures and the related EEG findings to each of the above-stated groups.

## RESULTS

*1. Analysis of Cases with History of Unconscious Attacks or Fainting Spells.*

Of 469 patients admitted with a possible convulsive disorder only 206 were discharged with a diagnosis of epilepsy. Fifty percent of the 206 showed abnormal EEGs and 20% showed slightly abnormal EEGs. One hundred forty-seven of the 469 patients were discharged with the diagnosis of personality disorder and of this group 15% had abnormal EEGs but 25% presented slightly abnormal EEGs. Sixty-two were discharged with the diagnosis of psychoneurosis and of this group 15% had abnormal EEG but only 10% had slightly abnormal EEGs. The remaining 54 patients were discharged with

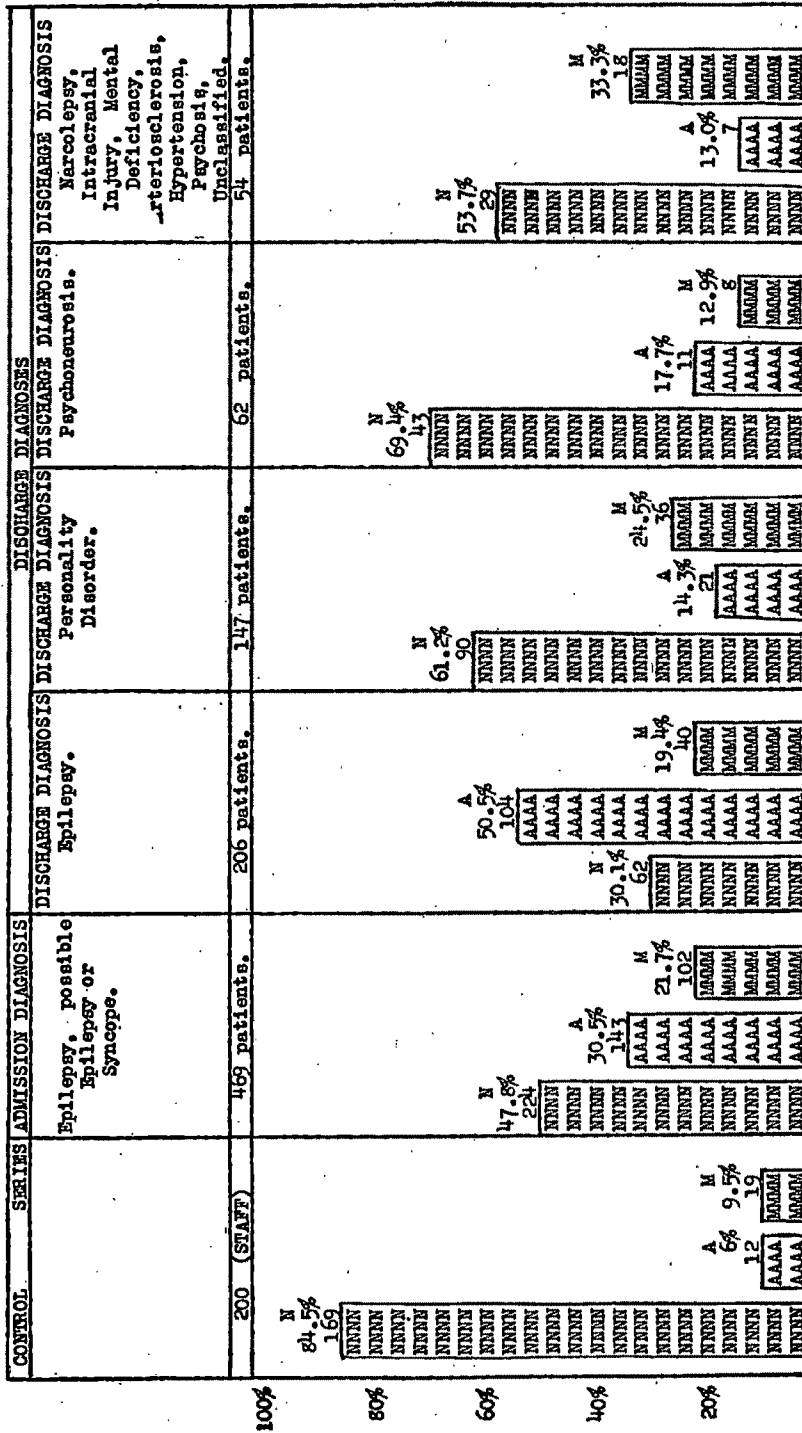
various other diagnoses as listed on Graph 1. They showed an average of 10% abnormal EEG but almost 30% had slightly abnormal EEGs.

*2. Analysis of Cases Discharged with the Diagnosis of Epilepsy.*

a. Those with recently observed seizures. (See Graph 2.) (Insufficient information was available on 9 of these 206 cases and they were not included.) Analysis of 197 cases that were discharged with a diagnosis of epilepsy disclosed that 127 had since being in the service been observed in one or more typical grand mal seizures during which the patient became cyanotic, had tonic and clonic contractions of his musculature, was unconscious and upon recovering consciousness complained of headache and drowsiness. Of this group 63% had abnormal EEG and 11.8% had EEG that were slightly abnormal; 25% had normal EEG. Repeat EEGs were done on those who showed minimal changes with the first tracing. If the second or third tracing was increasingly abnormal the most abnormal EEG was used in tabulation of the statistics.

b. Those with observed seizures prior to naval service. (See Graph 2.) Seventy of the 197 cases analyzed that were discharged from the service with epilepsy had been observed since entering the service in one or more attacks of unconsciousness without any other symptoms typical of a grand mal seizure. However the majority of these cases either had a history of previous grand mal seizures obtained through a reliable social service agency or gave a history of grand mal attacks or attacks of unconsciousness prior to entering the service. Of this group 47.1% showed abnormal EEG and 15.7% showed slightly abnormal EEG.

c. Variation of EEG findings with age in epileptic group. Analysis of the 197 cases that were discharged with the diagnosis of epilepsy disclosed that 89% were in the age group of 17-30, 8% in the age group of 31-35 and 3% in the age group of 36-40. The age distribution of a comparative "control group" (200 cases) revealed that 80% were from 17 to 30 years of age and 20% in the age group of 30 to 40. (See Graph 1 for percentage of EEG abnormality



EEG Interpretations N: Normal, including frequencies of 8 to 13.5 per second. Gibbs' class.

A: Abnormal, including S.2, F.2 and paroxysmal tracings. Gibbs' class.

M: Minimal, including S.1 and F.1 tracings. Gibbs' class.

GRAPH 1.—Control series (age group 18-30 years). Groups 2, 3, 4, 5 and 6 show comparison and EEG correlation of admission diagnoses and discharge diagnoses on 469 patients in age groups of 18-30 admitted with the diagnoses of epilepsy, syncope and neurological observation.



from this hospital but were transferred to another naval activity with the diagnosis of psychosis (epileptic).

e. History of head injury. Analysis of 197 cases disclosed that 19 cases gave a history of head injury prior to the onset of the convulsive disorder. Of this group 15 gave a history of head injury within 5 years of their first seizure. Nine showed greatly abnormal EEG and of this group 4 tracings were focal in type. Four showed slightly abnormal EEG and 1 of these was focal in type. The remaining 2 were normal.

#### DISCUSSION

A comparison of Gibbs' series of 730 adult epileptics(7) with the 206 cases discharged with the diagnosis of epilepsy of this series shows a striking similarity in the EEG abnormalities: 51.3% and 50.5% respectively. There appears to be a discrepancy in about 12% in those showing minimal abnormalities: 32.4% (Gibbs) as compared with 19.5% in this series (S.1 and F.1 tracings: Gibbs). When EEG findings in 127 of the 206 patients discharged with a diagnosis of epilepsy who were observed with grand mal seizures were compared with Gibbs' series there appeared to be a 12% difference in the abnormal EEG: 51.3% (Gibbs) as compared with 63% in this series. These 127 were a select group and the difference might be explained in that when repeated tracings were done the most abnormal EEG tracing was used for the statistics. Since the Gibbs criteria were used for evaluating this series a comparison was also made between his series of 1000 controls(7), Harty and Gibbs'(9) series of 275 military inductees, Hoefers' control series(10) and a "control group" of 200 pharmacist's mates done at this hospital (11). (See Graph 1.) There was a significant similarity in the "control" series when compared with those of other workers: Gibbs(7) 15.8%, Hoefers(10) 15% and the author's series of 15.5%(11). These figures are for total abnormalities which included greatly and slightly abnormal electroencephalographic readings.

According to Lennox'(12) most recent report approximately 86% of petit mal types of epilepsy occur under the age of 20. It is interesting to note that in his vast experi-

ence with epilepsy he had never seen a typical case of true petit mal begin after the age of 20. Our findings are in accordance with this as only 4 cases in a series of 197 discharged epileptics showed the typical "petit mal" waves. Since 70% of the cases discharged with the diagnosis of epilepsy in this series were observed in unconscious attacks with no other symptoms of a grand mal seizure it would appear that a relatively high number of clinical petit mal cases of epilepsy were included. However the majority of these cases gave a history of one or more grand mal seizures in the past which was substantiated by a reliable social service agency. Some of these cases with "attacks of unconsciousness" gave a typical history of "blackout" following head injury as described by Denny-Brown(13). It would appear that the majority of EEG findings appeared as S.2 and F.2 abnormalities in those classified as abnormal(6, 7) and F.1 and S.1 findings in those that were classified as having minimal abnormalities in the EEG(6, 7). It should be noted that almost all of the tracings were taken in interseizure periods.

Comparison of similar age groups in the epileptics and control groups shows a distortion of the representation of the 17-20 year age group in the epileptics. One factor producing this was the average greater length of service in the control group. A second factor is the large number of male epileptics who have their first seizures after the age of 15(14) so that more epilepsy is revealed in the younger group analyzed here while the older epileptics had been weeded out by the induction boards to a great extent. It is interesting to note that in the epileptics the percent with gross abnormalities in the EEG steadily decreases with each sub-group. This has also been noted by other investigators.

#### COMMENT

Since a high percentage of the armed forces lay between the ages of 18 and 24 years and since 29% of all grand mal seizures present themselves after the age of 20 and approximately 45% of the first grand mal seizure after the age of 15(14) it becomes self-evident why epilepsy assumes



such an important rôle in military activities. Statistical evidence of World War I reveals that 1 out of every 200 inductees was rejected from the armed forces because of a history of seizures (14). Although statistics for World War II are not yet available as to the initial rejection rate because of epilepsy it may be assumed that they would be of about the same proportion and that the majority of cases suffering with idiopathic convulsive disorders were eliminated at the induction centers. However a certain number of individuals either predisposed to or suffering from a convulsive disorder "filtered through" these centers by either minimizing or concealing their affliction or because the cerebral dysrhythmia inherently present had not yet manifested itself as a clinical attack of epilepsy. This group should be commended for their patriotism especially those who stayed in the service for years and underwent terrific stress and strain in combat before their convulsive disorder was discovered or presented itself. How important a part extreme fatigue, unsanitary conditions at the front, loss of sleep, excessive excitement, blast concussion and the like played in the production of the first grand mal seizure cannot be determined at this time. Since 95% of individuals with a hereditary dysrhythmia go through life without a seizure (14) and since 10% of a normal population have a cerebral dysrhythmia (14) it will be of interest to see if future statistics will determine whether or not the intense strain of military environment has increased the incidence of epilepsy in the ten million persons who comprised the armed forces as compared with a civilian population in a similar age group. There is accumulating experimental evidence showing the effects of certain auditory frequencies on the production of "audiogenic seizures" in the rat and the apparent relationship of constitutional and hereditary factors to this type of seizure (15, 16, 17). In relation to this basic work it should be mentioned that certain medical observations at a front line marine activity in the Okinawian invasion (18) revealed cases of convulsive seizures of unexplained etiology during periods of acute stress in combat while under heavy fire. Whether audiogenic stimulation by certain

frequencies due to "blast" and mortar fire were factors is debatable but has been suggested by competent medical observers who had firsthand information of these cases.

According to one medical observer certain men while in intense combat were seen to fall suddenly to the ground and undergo severe convulsive seizures following which they made uneventful recovery after several days of rest. Another medical observer in the Iwo Jima campaign (19) stated that during heavy fire he saw several men fall and have tonic contractions of their extremities and myoclonic twitchings of their facial musculature. However he felt that in these cases the patients were not totally unconscious but were suffering from "hysterical fits."

#### SUMMARY AND CONCLUSIONS

1. The physiological and psychological factors relating to idiopathic syncopal attacks are discussed since this symptom was predominant in the group discharged with non-epileptic diagnoses.

2. The symptoms produced by arresting cerebral circulation in man (4) and the syncopal attacks observed in certain cases of personality disorder and psychoneurosis are compared.

3. The ultimate discharge diagnosis and EEG correlation were considered in 469 patients admitted with a diagnosis of epilepsy or a possible convulsive disorder and analysis showed that less than half were discharged from the naval service with a diagnosis of epilepsy and that the EEG abnormalities were significantly higher in this group.

4. Of 469 cases admitted with the possibility of a convulsive disorder 147 were discharged with a diagnosis of personality disorder and 62 with the diagnosis of psychoneurosis which made up about 44% of the admission group.

5. Analysis of 206 cases discharged from a U. S. naval hospital with a diagnosis of epilepsy is presented. The EEG findings are compared with a control group. There is a similarity between Gibbs' series of EEG findings in 730 adult epileptics and with his series of "controls."

6. Nineteen cases or 9.6% of the series gave a history of head injury 1 to 10 years

prior to their first convulsive seizure. Of these 19 cases 11 had abnormal EEG, 5 of which were focal in type.

7. Of this series 127 patients had been observed in typical grand mal seizures, and of this group 63% had greatly abnormal EEG and 11.8% showed slightly abnormal EEGs.

8. Typical petit mal histories in this series were rare as were typical petit mal waves in the EEG tracings. A possible explanation for this may be that all of the patients considered were over 17 years of age and 90% of them were in the age group of 17-30 years; the remaining 10% were over 30 years of age.

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19. Personal communication with medical officer.

## SOCIO-ECONOMIC ASPECTS OF THE SHOCK THERAPIES IN SCHIZOPHRENIA<sup>1</sup>

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The benefits of electroshock therapy in the various categories of mental illness are controversial. The depressions respond almost completely, and schizophrenia less felicitously. But although the schizophrenic patient rarely harvests a full recovery, nevertheless his life and his family's are radically changed. In many cases schizophrenic patients electrically treated are able to return home, a journey back which the *præcox* of a decade ago rarely knew. The partially restored human being, outwardly not sick enough for institutionalization, but still socially maimed, constitutes a socio-economic problem of considerable consequence. The purpose of this paper is to consider the problem.

Our attention was impelled towards this issue when we began to analyze the first fruitful years of electrotherapy. The success of the treatment was written in what appeared to be the triumphant figures which showed a 50% decline in commitment of patients from the wards of a private acute treatment center to state hospitals; 95% of depressed patients were sent to their homes—the figure had always hovered at less than 60%. Sixty-six percent of schizophrenics returned to home and family—had there ever before been such a record after a brief thirty days of treatment?

We became aware of a new problem in psychiatry in diverse ways. Schizophrenic patients of the community became well known to us—for we seldom lost contact long enough to forget their faces and problems—and those of their families. They returned for further courses of treatment, sedatives, psychotherapy—and their families for advice and reassurance. This contrasted strongly with the depressed patients and manics who became well almost precipitously, resumed adult responsibilities and were soon no longer thought of as "pa-

tients." Few schizophrenics discarded the designation "patient," even after assiduous treatment.

Although electroshock therapy and its results will be stressed in this paper, consideration will also be given to insulin therapy and its effects. Electrotherapy has supplanted insulin techniques in great measure for reasons of economy, safety and provisional effectiveness, but much of the statistical data regarding the restoration of patients is based on the insulin-treated groups of 5, 6 and 7 years ago. In any event, from one viewpoint the results are the same—a patient altered, tempered, deflected by treatment, but yet not completely well, has come home and must be fitted into the life of his family. In general, it is felt that electrotherapy is repeating the achievements of insulin, but we are still some distance from labeling these achievements as triumphs.

The argument here offered follows this chain of reasoning: (1) Shock therapy has effected the release from hospital care of large numbers of psychotic patients who would otherwise have remained hospitalized for longer periods of time, in some instances for life. Statistical data from state hospitals and private institutions have been marshalled to demonstrate this. (2) Significant numbers of these patients (particularly schizophrenics but also some patients with affective psychoses) are not sufficiently well to be easily integrated into the complex life of the family and require adjustments by the family. This phase is reflected specifically in the high re-admission rate of schizophrenics and in the follow-up studies of schizophrenics in the community. It is reflected less factually, but still more tangibly, in our own day by day attendance of a group of schizophrenic patients returned to the community. (3) The burden carried by the family may sometimes be disproportionately high compared with the benefits to the patient and to society from his release. This burden encompasses finan-

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cial, social and emotional constrictions on the family in many instances. (4) The problem is a constantly fluctuating one, and the equation of patient, family and society will vary with changes in therapeutic efficacy, length of hospitalization, and in such broader factors as family economic levels and general education regarding mental illness. (5) The resolution of this problem varies with these factors, but suggestions are offered for attacking the issue as it stands today.

#### ADMISSIONS, DISCHARGES AND COMMITMENTS OF SCHIZOPHRENICS

Vital statistics on mental hospital activities have been meager during the war years. It has not been possible to collect full data from any one state or from a group of large hospitals relevant to the effect of electroshock therapy on admissions and discharges. These figures have not been collated.

Studies on the results of insulin coma therapy are numerous. Reports on the outcome of electric convulsive therapy and of combined insulin-electric treatment are relatively few. Metrazol convulsive therapy is falling into disuse. There is no uniformity in the method of reporting results. Some papers report small series of patients. Others fail to state the duration of illness and do not separate acute from chronic cases. Other studies, according to Kalinowsky and Hoch(1), are "frequently inconclusive as they collect dissimilar material from institutions which may differ widely regarding diagnostic principles, types of patients admitted, intensity of treatment and evaluation." Follow-up material is, likewise, subject to the same criticism. All sources of information betoken the fact that significantly increased numbers of treated psychotic patients have been returned to their communities during the epoch of shock therapy.

The more abundant information is drawn from studies on insulin-treated patients, several samples of which are cited below. Malzberg(2) in 1938 reviewed 1039 cases of whom 510 (49%) had been paroled. Of this latter group, 25% returned to the hospital within 1 year. Gralnick(3) in 1945 reported a 7-year survey of 554 insulin-treated schizophrenics. An interesting and illumi-

nating analysis of rate of return revealed that 73% of those who had been treated in 1937 had been required to surrender their parole during the subsequent 6 years. The figures of 1938, 1939 and 1940 were between 49% and 54%, and in 1942, the last year examined, the percentage stood at only 13%. The significant conclusion was that for the 6-year period, 75% of those treated had proven to be eventual failures.

The compelling deduction from this study is that 268 patients returned to their communities, their families, their responsibilities and to their accountableness, and that a large number of these men and women failed to fulfill the hopes projected for them. Our own experience with patients of this type—living in the same city with them, responsive to the written, telephoned and personal requests for advice from their families—leads us to believe that many of them must have imposed economic and emotional enigmas for their relatives. How well or ill they adjusted during the 1 or 5 years at home has not been objectively studied or reported so far as can be determined. (Probably every psychiatrist can patch together his own conception of the intimate home life of these patients). Many undoubtedly improved their adjustment by transferring from the hospital to the home. Some brightened the lives of parents or spouse for long or short periods. Some contributed materially to friendship, family or society. The full value of emotional and socio-economic experiences like these cannot, of course, be measured. It is probable, however, that some patients imparted little to the group which received them, while requiring care and devotion to a growing degree. It is probable that many were retained in the family group beyond the point of worth to themselves or to others (in the broadest sense), beyond the day when rehospitalization might have reinforced temporary gains, beyond the signposts spelling increased burdens and perhaps hardships for the family group.

Taylor(4) in 1945 reviewed 214 schizophrenics who had received insulin therapy during 1937 through 1939. Of this group 153 (71%) had been released following therapy and 125 were still out of the hospital 5 years later. One hundred five patients

had not returned to the hospital at all and an additional 20 had been rehospitalized and subsequently released again. These figures are at considerable variance with the aforementioned studies, since only 28 patients (18%) of the discharged group had eventuated as failures. The data do not permit a qualitative analysis of the reasons for this discrepancy. The criteria for parole, discharge and rehospitalization in different hospitals have not been stabilized. Taylor reported that his patients were checked once yearly by social workers, noting that no definite conclusions were inferable except that many patients seemed better. The need for more complete appraisal of these patients at home is apparent. Taylor points out that this group of patients were out of the hospital a total of 2209 weeks, and validly concluded that the saving of more than \$24,000 (at \$10 per week) must be taken into consideration. It would be difficult to be sure, however, that the cost of these patients to their families and to society, in tangible costs and emotional levies together, was not more than \$24,000.

Several other reports reviewed by Kalinowsky and Hoch(1) reveal remission rates in early schizophrenics 5 or 6 times greater than before shock therapy. Within 3 years, however, according to Bond and Rivers(5), 50% of the remissions had shown their full illness again. Cheney and Clowe(6) found that after 2½ years a quarter of their remissions had returned to the schizophrenic pattern.

A smaller number of reports on electrically treated patients has been published. Normal and Worthington(7) treated 59 schizophrenics of whom 13 were "on visit," that is out of the hospital, at the time of the survey. No data on their home adjustment were made available.

Malzberg(8) reviewing the findings in 3 different New York State Hospitals, reports recovered and much improved cases ranging from 41.1% to 16.2%. Impastato and Almansi(9) find that the results from ECT are comparable to those obtained through the use of insulin coma therapy. Kalinowsky(10) found, in treating 275 institutionalized schizophrenics with a minimum of 20 convulsions, that the remission rate was 68.3%

in cases of less than 6 months duration, 41.5% in cases of 6 months to 2 years duration and 9.2% in patients ill more than 2 years.

Combined treatment using various methods of employing both insulin and electrotherapy offers new possibilities for improving the results. Von Braunmuhl(11), reviewing the effect of combined treatment on 563 patients after 5 years, found relapses in 9.6% of the cured and 32.0% of the improved who had been ill less than 6 months at the time of treatment; 22.8% of the cured and 8.7% of the improved, when the illness was from 6 months to 1 year; and when the patient was ill more than 1 year, 28.3% of the cured and 12.8% of the improved relapsed.

Chapuis and Georgi(12), treating cases of less than 6 months duration, were able to effect a remission in 94.6% with combined therapy. Seventy percent of these appeared well after 5 years. After 7 years, 50% were still stable. The relapses occurring in the sixth and seventh years were among the "social" remissions and not the "full" remissions.

Supplementary data are drawn from a detailed statistical study of the psychotic patients admitted to the closed psychiatric wards of a general hospital serving a large city. The year 1936, on the threshold of the shock therapies, has been compared with the year 1943, when this form of treatment had attained as full acceptance, perhaps, as it will know for some time to come.

Before examining the significance of the greatly decreased commitment rate between 1936 and 1943 it is necessary to explain the reasons for the wide discrepancy in the total admissions of schizophrenics in these years. Almost four times as many patients diagnosed as schizophrenics were admitted in 1943 as in 1936, 179 as compared with 45. Four factors may help to account for this discrepancy. The first lies in the differential rate of readmissions during these years. Readmissions may be considered failures in therapy, and the actual number of schizophrenics in a community should be estimated from first admissions.

The second factor to consider is that the total number of patients of all kinds received

by the closed psychiatric wards of the hospital during 1943 was 25% larger than in 1936. The accretion was really greater than this, since certain categories of patients placed on the closed wards in 1936 were hospitalized on open wards in 1943 and were, therefore, not included in the admission figures. Patients with central nervous system syphilis, epilepsy, senility and other organic conditions were frequently treated on the open ward when they were tractable. Alcoholics were rejected at times because of lack of space.

The third factor is the significant change in diagnostic criteria between 1936 and 1943. This shift was especially prominent in the category of the manic state, which was diagnosed frequently in 1936 (43 times) and infrequently in 1943 (19 times). The reasons

patients, although discharged free from delusions and bizarre behavior, could not adjust satisfactorily in the complex society of the community. Readmission tallies support this viewpoint to some extent, since 50 of the schizophrenics seen in 1943 were readmissions, or 28%. Moreover, of the readmitted patients, 25 or 50% were committed, whereas only 27% of first admissions were committed.

In brief, our experience supports the feeling of Kalinowsky and Hoch that follow-up material is still scarce and inadequately controlled in terms of duration of illness, diagnosis and intensiveness of therapy. We would add that there has been insufficient scouting of the "blind spot" between the end of one period of therapy and the beginning of the next, especially in terms of the

TABLE I

## ADMISSIONS AND COMMITMENTS OF SCHIZOPHRENICS, 1936, 1943

	Schizophrenics admitted			Schizophrenics committed to state hospital		
	1st adm.	Readm.	Total	1st adm.	Readm.	Total
1936 .....	36	9	45	26 (73%)	5 (55%)	31 (69%)
1943 .....	129	50	179	35 (27%)	25 (50%)	60 (34%)

for this drift away from the manic diagnosis need not be discussed except to point out that it is fairly common to find that patients initially diagnosed as manics are reclassified as schizophrenics on later admission.

A fourth factor accounting for mounting schizophrenic admissions is inherent in the nature of electrotherapy. Patients with very early signs of morbidity are now hospitalized for electric treatments whereas 10 years ago they would not have been admitted, because this therapy was not available. These early manifestations now lead to treatment in an acute treatment center, whereas a decade ago the syndrome would have been permitted to blossom until direct admission to a state hospital was necessary.

The significance of the declining commitments may now be stressed. The commitment rate for all schizophrenics in 1936 was 31 out of 45 cases or 69%, and the rate in 1943 was 60 out of 179 or 34%. The patients who were not committed were restored to the community. This figure stood at 10 in 1936 but climbed to 94 in 1943. It is our impression that the majority of these

family's calls on its own resilience to prolong the home care of the patient.

A special phase of treatment which can bear scrutiny is the recent upsurge in the number of patients who are being treated with ambulatory electrotherapy. Although sparsely documented in the available literature, the use of this method is a recognized fact. The transition from in-patient to out-patient therapy in our hospital has been recently reported (13). The impression is gained that many patients with psychoses and with less serious psychiatric illnesses are given repeated electrotherapy in the psychiatrist's office or as out-patients in acute treatment centers. Following treatment the more or less confused patient is led to his home by a relative or friend.

Ambulatory treatment has peculiar appeal for the families of psychotic patients. It offers them what appears to be a ready, quick and active solution to what is often a terrifying problem. More important, however, is the fact that it suggests a means for escaping the stigma which state hospital commitment implies to them, their neighbors and

friends. Although much has been done to educate the public away from such an attitude, it still prevails. Ambulatory treatment has the further appeal of avoiding the expense of hospitalization. In addition, it is maintained by some that keeping patients in a normal home environment has, for some cases at least, a greater psychotherapeutic effect.

The problems precipitated by this form of treatment are many. Transportation must be provided for both the patient and the escort. This is often time-consuming and expensive. The escort must be a responsible person and the loss of income to him may be considerable. The patient may be resistant, requiring considerable persuasion two or three times a week. He may even have to be compelled forcibly to keep his appointment. During the time the patient is undergoing treatment he may insist on working or on attending to affairs away from his home. Such endeavors, because of his confused state, may be hazardous not only to his personal safety and to the safety of others, but also may harm his relationships with associates who misinterpret his confusion and memory impairment. In the occasional instances where an organic factor intervenes, and the patient becomes paranoid or aggressive, a further burden is imposed on the already overloaded family. The anxiety in such families each time the telephone rings is understandable. What new escapade has occurred? What new embarrassment has been created by the unstable patient roaming the streets? Problems peculiar to individual family situations are not rare. Despite the fact that full instructions are given to families they may be unable, for financial or other reasons, to carry them out. For example: a young woman undergoing ambulatory electrotherapy was found by a social agency to be caring for her infant child while markedly confused as a result of treatment. The patient was alone, for her husband had to work, and the high school girl (inadequate assistance at best) employed to help her was not available.

This stress on the negative aspects of ambulatory electrotherapy is admittedly biased in order to make vivid the situation of the family with a partially cured patient at

home. The positive, fruitful gains of itinerant electrotherapy outweigh these deterrents by far. Indeed, we have in a recent paper (13) heralded the development of ambulatory therapy, and described our own experience with a large number of cases. The schizophrenic patient poses the most difficult problems with this form of treatment, and the predicament of the family sheltering the ambulatory patient parallels that of families harboring discharged schizophrenics. Indeed, the discharge is often only temporary, and many schizophrenics are held to a schedule of interval therapy which is, in a sense, widely-spaced ambulatory therapy. It is necessary to add that these thoughts apply to only a portion of those patients in whom treatment is undertaken.

#### DISCUSSION

It is recognized that shock therapy yields most auspicious results in patients of certain types, intensities and durations of illnesses. Yet in an illness like schizophrenia, where therapy held out little hope for decades, and then suddenly gains power, it is inevitable that patients of all ages, of all types, of all stages, will be subjected to the new remedy. Where the young, newfledged patient may respond and return to useful work, the more advanced patient may show similar surface improvement, but fail when he attempts adjustment at home. This failure may long be camouflaged by the hopes of the family, be it however intellectually on guard.

It may be that psychiatry has not yet determined the optimum number of electric treatments for different types of cases, or the duration of the course of treatment. While we pore over the many studies necessary to yield these answers, the socio-economic problems appear as side-products of the diverse endeavors. In some instances it seems desirable to treat for a month, and then observe behavior following the subsidence of the confusion period. But if behavior shows the psychosis continuing, resumption of therapy may be delayed, neglected, postponed "for a short time," "forgotten" or otherwise deferred. If therapy continues for 20, 30, 50 treatments, however long, a period of observation must ensue (during the years we are painstakingly

gathering criteria and end points, and drawing conclusions) during which the family must help the patient make his adjustment.

If, in a community of two or three hundred thousand, 94 schizophrenics are restored in one year, the totals for the state and country must be impressive. These patients have been subjected to electric or insulin therapy or both, and the venom of the psychosis extracted, but snags still hamper their adjustments in many instances. This socio-economic aspect of the parolee and of the ambulatory shock patient, together with their families' problems, requires careful study. Our own impression of this need springs from day-to-day attempts to help them meet these obstacles. No statistical analysis or objective survey of conditions at home has been essayed, but programs in this direction grew in the form of questionnaires used to study the home behavior of patients on ambulatory shock treatments. Hundreds of patients were seen during the development of this mode of therapy, many of them the schizophrenics from whom the sharpest thorns of illness had been removed but who were still sick.

The advisability of electrotherapy or of insulin therapy at this stage of our knowledge cannot be challenged, but a reconnoitering of the sociological settings into which the patients return would seem to indicate that more careful control of this period is necessary. When the patient's inadequacies interfere radically with the lives of the members of his family; when the economic burden mounts steeply; when constant supervision is necessary—in short when the patient is patently not good for his family, and equally, the family not good for him—further steps should be taken. These steps are usually too long delayed for understandable reasons of pride, sympathy and hope. The necessary steps are not inevitably repetition of shock therapy nor certification to a state hospital. Custodial care at some level in between, bulwarked by occupational therapy and psychotherapy, might resolve this Gordian knot. The so-called stigma of full commitment, and the despair of having a loved one confined with patients considered hopelessly and irretrievably ill, might thus be avoided.

One fundamental result has insidiously emerged from the new emphasis on active treatment of psychoses. Stated baldly, it is that there has been a shift of a not inconsiderable portion of the responsibility for the care of the schizophrenic from the state to the individual. Where formerly most psychotics were placed in state hospitals as soon as their usefulness at home was over, many are now treated privately to the extent that individual financial resources and individual family situations permit. Whether this constitutes a criticism of the economic direction in which the care of the mentally ill is moving will depend upon one's own social attitudes. However, the state should recognize that new problems exist as an outgrowth of new procedures and should redefine its responsibilities for the care of the psychotic in terms which will take into consideration the social and economic resultants. Furthermore, plans should be outlined which will anticipate and solve as many of these problems as possible. Such a plan is proposed below.

It must be emphasized that we are not primarily concerned with protecting the family from the so-called "stigma" of mental illness or of state hospitals. We hope that some plan may eventually be evolved which will teach people in general the true nature of mental illness and the real value of state hospitals, while at the same time providing more ample care of the patient. We hope that such a plan may protect the family from its own emotional quicksands, and thereby become an important plank in the mental hygiene structure of the community. The family is thus liberated from stigma in the most constructive way—by being encouraged to participate in the community's coordinated endeavors to solve the problems of mental illness at every level, from medical to economic. It is not possible to present a fully blueprinted plan at this time but the following points should be emphasized. It should be pointed out that none of the suggestions to be made are completely new to psychiatric care, when considered individually. However, they have been reformulated, reorganized and newly stressed to find an answer for a fresh problem, one of the many evolving from new therapeutic attempts.



An initial effort in fostering the home care of ambulatory or "interval" patients should be directed at furthering the understanding of relatives while the patients are still under active treatment. In a recent paper (14) we described the individual and group methods utilizable in the instruction of relatives. It was pointed out that the queries and problems of individual relatives are frequently overlooked through lack of time, and it was suggested that a meeting each morning with a group of relatives seeking information, of perhaps an hour's duration, would not only provide more ample answers but would also initiate the special communizing values of group sharing of emotional problems.

Secondly, the rôle of the psychiatric social worker in the problems here posed should be stressed. First, he can participate in the group work with patients and relatives in the hospital setting itself. Second, he can collaborate with the psychiatrist in many features of ambulatory therapy, including especially the group conferences with relatives during the waiting period while patients are being treated. Giving reassurance, obtaining information concerning home and community behavior, and evaluating home influences are part of this function. Third, the more adequate supervision of home behavior may be entrusted to skilled workers. The evaluation of this interval period takes precedence over considerations of renewed therapy or custody. A careful measure of the social value of the patient, combined with an optimum threshold of suspicion in relatives, will eventually lead to the proper reinstitution of care, whether occupational, recreative, custodial, supportive or full hospitalization.

The third building stone in the prolonged care of schizophrenic patients in the community would be adequate followup by means of psychiatric examination. This step would be supplemented by the endeavors of the social worker. A planned schedule for the periodic evaluation of treated patients, whether private or clinic cases, should be adhered to. The problems arising because of limited personnel and resources must be met by education and group techniques.

A fourth, and most important, consideration involves the establishment of acute

treatment units strategically located geographically and apart from the state hospital itself. Such centers would, from their inception, be more readily accepted by the community than the older state hospitals from which relatively few patients return home. Moreover, they would, by their educational activities serve to remove some of the stigma with which state hospitals are invested in the eyes of the public. The acute treatment units should be staffed by teams of psychiatrists, psychologists, social workers and nurses and ought to operate as reception centers for acute psychotics. Patients who are amenable to treatment can be studied, treated and housed long enough to fully assess the results of treatment before returning home. Patients whose prognoses are poor or who have failed to respond to treatment can be transferred to centrally located state hospitals for custodial care and longer-ranging therapy. The units, being a part of the community, can act as public hygiene centers for the purpose of education, for prophylactic mental hygiene, for child guidance clinics and for ambulatory shock treatment in carefully selected cases. They will be readily accessible to disturbed patients and the "repeater" whose personality aberrations and whose home situation will be familiar to the professional group.

The problem of obtaining personnel for these expanding functions is not a simple one. It is an aspect of the larger task of paying for medical security. It adds to the job of training and distributing psychiatrists, social workers and psychologists. It may seem impractical when we think of the existing state hospitals already understaffed, overpopulated, meagerly subsidized. The shock therapies seem to have opened one small ventway to relieve this growing pressure on our resources. But the patients whom shock frees from the hospitals (and of whom, conversely, the hospitals are lightened) constitute the important, threshold, early, salvageable group. The burden of the state hospitals is made hardly less heavy. Their relief must come additionally from many other sources. The return of these patients to hospital channels should be encouraged when necessary. Provision of hospitals expressly for them makes avail-

able more intensive care and treatment and makes it less likely that they will be neglected in the understaffed large hospitals.

#### SUMMARY

The shock therapies have provided a portion of relief for the enigmas of schizophrenia. However, socio-economic problems of considerable import have emerged together with the partial successes of this therapy. For one thing, there has been a subtle shift of responsibility for the care of the mentally ill patient from the state to the individual family in many instances. Secondly, the family has been burdened with issues other than the immediate care of the patient, including changes in their living habits. Perhaps the major question which many families have been poorly prepared to meet lies in the responsibility for resumption of treatment at the proper time. Suggestions have been made for a plan designed to meet some of these problems. They embrace psychiatric, social and economic considerations together with a program for mental hygiene.

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## ELECTRIC CONVULSIVE THERAPY IN STAMMERING<sup>1</sup>

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When a disease whose etiology is controversial is treated by a technique whose action is obscure, it is possible that the results may illuminate both the illness and the therapy. The basis for stammering has been variously attributed to physical deficiencies, physiological imbalances, psychological maladjustments, or a combination thereof. Likewise variously, the benefits from electric treatments have been explained on the basis of their physical, physiological or psychological effects. Which explanation one prefers would seem to depend rather upon the proclivities of the reader than upon the merits of the investigations upon which the explanations are based (psychological, physiological, or psychiatric). Since the investigations are in many cases equally painstaking and conscientious, the maximum benefit to the stammerer should derive either from an entirely new therapeutic technique, an eclectic one, or both.

It is the purpose of this paper to correlate the pluralistic approach toward stammering with one of the newer therapies, electric convulsive. To test the practical applicability and efficacy of the method, a case study with these points in mind is reported in detail.

The patient, a 20-year-old white girl, was referred by the State Rehabilitation Department because of a speech defect which prevented her from procuring work. Six months previously she had graduated from high school, where, in spite of the fact that her grades were necessarily dependent upon written work alone, she had been able to maintain a "B" average. Apparently her social adjustment was also satisfactory, as she had many girl friends and enjoyed dancing and motion pictures. She avoided going out with the opposite sex after one experience, presumably because of the speech defect. In spite of her other assets, she was unable to obtain employment as a typist, for which she had trained, because of severe stammering that had progressed to almost complete speech stoppage. Hospitalization for a reeducational program was therefore recommended.

On admission the patient was cooperative and obviously eager to please. She was appreciative of anything done for her either by the personnel or other patients. She rarely spoke voluntarily and, unless asked a question which could be answered by one word, there was complete speech blockage. Historical data, both psychiatric and medical, were secured from the patient in numerous sessions, the interviews being used for speech training as well as to secure information.

The patient was the second of 3 children, having a sister 10 years older and a brother 6 years younger, the latter dying in infancy. It is unlikely that the 3 children were of the same father, as the mother's relationships with the opposite sex, then and now, apparently were governed rather by financial expediency than by social acceptability. Early in life, the patient had had no speech difficulties, although an uncle with whom she lived for a short time was a stammerer. The father deserted the family early and the patient remembers nothing about him. Soon after the death of the infant brother, the mother injured her knee, producing a disability which, while slight, has provided ample excuse for her failing to seek legitimate employment. The patient dimly remembers many unrelated men about the home, one of whom made a mild attempt at sexual play with her.

Soon after this incident, when the patient was 7 years old, she and her mother were sent to the County Detention Home for reasons which are unclear, but which can probably be attributed to the mother's pauperism and her antisocial reputation in the community. The older sister, then working in a factory, made her home with an uncle. The patient's development up to this time had apparently been normal. She had never shown evidence of left-handedness or mixed cerebral dominance. While the patient could not remember any specific incident which precipitated the stammering, her entire experience in the detention home was a traumatic one. Her speech difficulties began soon after her arrival there, when she was being questioned repeatedly by everyone in the home concerning her previous life and her mother's activities. She remained in the home a year, where she started school, completing the first grade in spite of her stuttering. She felt that she was treated adequately, if not well, but missed her mother, whom, housed in another building, she was permitted only to visit.

At the end of one year, the mother acquired a job and established a home for the patient. The job lasted only a short time, the family then being partially supported by the Department of Public Assistance, until the patient was hospitalized. The income from this source was probably supplemented by "gifts" from male friends provided both the

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mother and the older sister, the latter flagrantly following her mother's surreptitious career. When the patient was 10 years of age, the sister became illegitimately pregnant. Beyond wondering why the baby was not born at home and what had become of the infant, the patient suppressed the feelings of shame which the incident generated, as effectively as she had the earlier sexual experience.

The feelings of guilt and disgrace initiated by the detention home experience were now supplemented by the irregular behavior of the mother and sister, behavior which the patient could neither condone nor accept. Her stammering became progressively worse and, except for the eighth and ninth grades when she had a sympathetic and understanding teacher, she rarely even attempted oral recitations. However, she never failed a grade and in fact did well in those subjects in which written work predominated. In high school she majored in commercial subjects, not because she was particularly interested in business, but because she felt that they offered her the best chance for becoming self-supporting and independent of the way of life endorsed by her mother and sister.

While her family did not flaunt their conduct before her, she was subconsciously aware of their activities, but chose to ignore them. To avoid this intolerable awareness, she repressed in herself all desire for and even information about sexual experiences. At no time did she openly criticize her family or permit others to do so. Her loyalty and sympathy through the years were so exaggerated that she had successfully suppressed any feelings of resentment. On the other hand, neither did she ever waver from her goal of earning an honest living and maintaining her self-imposed high moral standards. Although lacking any self-assurance that she could attain her ends, she never ceased striving for them.

The mother, however, either consciously or unconsciously, lest she lose the public assistance support for her child, did all in her power to foster the patient's handicaps and feelings of inferiority. Upon being introduced to the psychiatrist, the mother took charge of the conversation, thwarting the patient's feeble efforts to talk by continually declaring that the girl was incapable of speech and she, the mother, "always talked for her." Although reputed to be an excellent cook herself, the mother had never taught the patient, or even allowed her, to care for her own clothes, much less to cook or do other types of housework. The mother proudly stated, "I do everything for her, even talk."

The patient's general motor development, unlike that of many stutterers was not retarded. In fact, she learned new mechanical skills much more easily than intellectual ones. In the hospital, she quickly gained a reputation for free-hand drawing, designing greeting cards and sketching patterns to be applied to woodworking projects. The relaxation which was encouraged during the course of her speech training was never as successfully accomplished as by paper and crayon. At 10 years of age, while in the fourth grade, her I. Q. on the Helmon-Nelson scale was 85, a figure which

agreed with the clinical evaluation on admission to the hospital. At 21 years of age, one year following graduation from high school, a Nursing Aptitude Profile Test indicated an I. Q. of 98.

Physically the patient was an attractive girl with a cheerful and ready smile, until she began to speak. There would then be grimacing, clenching of the fists, quickening of respirations, sweating and similar psychomotor manifestations of a severe fear reaction. Both whispering and singing, if attempted at all, were accompanied by only slightly less severe somatic symptoms of terror. In neither instance was the resulting oral response intelligible beyond an occasional monosyllabic word. Physical examination performed when the patient was at rest was essentially normal except for a generalized equal hyperactivity of the tendon responses and numerous carious teeth. There were no abnormalities of the nasopharyngeal structures. Bilateral short cervical ribs revealed by routine chest roentgenography were entirely asymptomatic. Laboratory studies were also within normal limits. A fasting electroencephalogram recorded a dominant 9 to 10 per second rhythm with no abnormal bursts, but with occasional sleepy patterns. There appeared to be no essential differences in the tracings from the two hemispheres, although this information must necessarily be inferential, as only a single channel apparatus was available. A repeat EEG, 4 months after discharge, made under conditions similar to the first, revealed no change, except that no sleepy patterns were observed.

Speech reeducation was begun in the orthodox fashion. Great emphasis was placed upon relaxation, attempts to achieve this state being supplemented by continuous flow tubs and music. At the beginning of treatment group psychotherapy was stressed rather than individual interviews. The patient took an active interest in the group classes, not infrequently volunteering information, although speaking continued to be a very painful experience. Because of the patient's economic status, her earnest desire to secure a self-supporting job as quickly as possible and our inability to help her relax by the usual methods, a trial of electric treatments was begun. There was little change until the fourth treatment, after which improvement in speech was remarkable. She now not only answered questions readily but even initiated conversation and took an active part in group singing. The latter accomplishment was particularly gratifying to her, as she had always enjoyed choral work, had a pleasant voice, but had been too fearful to try lest she stumble over the lyrics. Thirteen treatments were given at 5-day intervals, the last being a petit mal seizure. The improvement following this type seizure was even more dramatic than following the grand mal, the patient being able to speak normally, except for a slight stammer during excitement. It was repeatedly noted during the course of treatment that, following a visit from her family, the stammering which had been negligible before the visit became markedly accentuated.

It was, therefore, decided, following the seventh treatment, to institute intensive psychotherapy and

work out a concrete plan for her subsequent career. It was quickly disclosed that the patient's chief interest lay in the field of nursing from which she felt barred by economic factors. It was also apparent that the mother was definitely handicapping the patient by fostering dependency, as well as by the maternal attitude that the community owed them both a living.

Following the last treatment, the stammering continued to improve, especially when the patient accepted the responsibility of nurse's aide for one bed patient. She did her work well, talked constantly to her patient, consolidated her desire to become a nurse, and generally gained more self-assurance. A nursing aptitude test given by the State Nursing Association revealed that she was poorly qualified for the profession by reason of her limited intelligence and prior training, but well suited according to her total social adjustment, rating very high in sympathy, self control, and loyalty. Therefore, although she was accepted by a reputable nursing school, she decided to accept the full time position of nurse's aide which was offered her and postpone training for another year.

From 3½ months after admission to date (one year later) she has worked faithfully as an aide, almost entirely for mental patients. Toward this group she has never shown any fear, but immeasurable patience and sympathy. Except for short periods when she assumes the responsibility for a particularly difficult patient, her work apparently has no effect on the stammering. When, however, during her weekly visits home she is confronted by her mother with a new family crisis, an exacerbation of the speech defect is immediately precipitated. At these times, if her own efforts plus psychotherapy are not sufficient to help her speech, one or two electric treatments are given. Six treatments have been given in this fashion about every other month, improvement resulting in each case, the improvement again being most spectacular following a petit mal seizure. In addition to their specific action in enabling the patient to speak better, the treatments induce a state of relaxation making her more available to psychotherapy.

During the first course, the treatments never generated fear. Since they have been placed on an intermittent basis, according to need, the patient has felt afraid of them, although recognizing that they are definitely beneficial. She has stated: "It makes me feel relaxed. I seem to be able to take more of an interest in people and can see more things to do. I feel less tired. It makes me think less about myself."

#### DISCUSSION

The history of this particular case of stammering attests to its basic psychoneurotic cause. It is apparent from a review of the literature that, in the case material of most psychologists and all physicians who treat stammering, the psychogenic factors in the disorder are outstanding (Greene and

Small(1), Despert(2), Leary(3), Meyer(4), Maskowitz(5), Rotter(6)). The psychosomatic symptoms and biochemical changes associated with the act of stammering (Greene(1), Hill(7)) mimic so closely similar changes in the nonstuttering psychoneurotics that correlation of the two conditions appears inevitable. Both the psychosomatic symptoms and the stuttering act itself are results, just as these same symptoms are the results rather than the causes of the psychoneurotic's anxiety attack.

There are three factors in the psychiatric history of stammerers which appear so frequently that they can be used as three psychotherapeutic guide posts. First, the lives of these patients appear to be especially controlled by a domineering mother; second, stammerers are more completely repressed than most psychoneurotics; and third, they have usually attained, if only superficially, a satisfactory social adjustment. The last factor is particularly important as this adjustment camouflages the stutterer's deep-seated anxieties, preventing his preceptors from assisting his basic difficulties, because they assume he is "psychologically normal" (Kenyon(8)). It was for this reason particularly that prior attempts by social workers, teachers, and physicians to help our patient were unsuccessful. The first two factors would have been quickly disclosed and appropriate remedial measures could have been more easily applied, had the third factor been recognized 10 years earlier.

If psychogenic factors are the basic ones in stuttering, one wonders why the condition is not more prevalent among the mentally ill generally. Barbara(9) reports an incidence of 0.28% among psychotics, less than that estimated in the general population. In our experience among psychoneurotics of all types, the percentage of stammerers is essentially the same low figure. Perhaps the stammerer discovers early in life that his speech difficulties, like the psychoneurotic's somatic complaints are, if not socially acceptable, at least socially pitiable. He finds, too late, the price he has paid for relief from responsibility and for society's sympathy. The question still remains why one child's fears appear as cardiac or intestinal symptoms, another's as oral difficulties.

The association within the family of another stammerer is probably an important factor. A traumatic incident in childhood, when stammering "saved" the patient is equally important. In our patient, her entry to the County Detention Home where she was questioned in detail regarding her mother's way of life was undoubtedly a determinant. Refusal to talk would have led to reprisals by the authorities; inability to talk was a legitimate excuse for withholding information.

The presence of an organic cerebral defect suggested by the theory of split laterality (Cobb and Cole (10)) and the electroencephalographic changes demonstrated by Freestone (11), Travis and Knott (12), and others are at present too variable to be of assistance in the management of the individual patient. The tracings procured from our patient were of interest to us, but of no particular help. Even had asynchronism between the right and left cerebral hemispheres been demonstrated, management of the case would still not have been changed.

The remarkable immediate improvement in speech after convulsive therapy followed by relapse when situational difficulties became qualitatively and quantitatively greater than the patient's insight, parallels the experience of Lewis (13) and Kalinowsky, Barrera and Horwitz (14), in the treatment of psychoneurotics. Those with anxiety neuroses, the group in which our patient would be classified, are notably poor subjects for electric treatment. Yet, this type of therapy was definitely of benefit here, as a release of inner tension was achieved and the patient became much more amenable to psychotherapy. The appreciably better effects following petit mal compared with grand mal seizures again emphasizes the difference between the psychoneurotic and the psychotic, in the latter the reverse being true.

### CONCLUSIONS

1. To illustrate the value of the pluralistic approach to the problem of stammering a case is reported in detail in which psycho-

therapy, speech training, and electric convulsive therapy were utilized.

2. The dominant psychoneurotic traits were amenable to psychotherapy only after convulsive treatment released the patient's inner tension.

3. Electric convulsive therapy is recommended in the management of severe stammering to shorten the period of treatment and to induce a more suitable atmosphere for both psychotherapy and speech reeducation.

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## GROUP PSYCHOTHERAPY IN PATIENTS RECOVERING FROM PSYCHOSES<sup>1</sup>

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Group psychotherapy has been used during recent years as an adjunct to other forms of psychotherapy and not to replace other methods, such as analytical or inspirational-repressive therapy. It has been the writer's experience that men, particularly under combat conditions, benefited from informal group discussions of their problems and anxieties with a medical officer or some person in authority present. They were made to feel comfortable, and much release of hostility and catharsis was noted. These men were usually quite surprised to learn that the fellow next to them had the same worries, and was not so different after all. It was learned that there was an improvement of the morale among these groups following these discussions.

Giles Thomas adequately summarized the use of group psychotherapy in 1943. The fundamental theories of group or crowd psychology were noted to be of greatest importance, and these ideas were made applicable to the practice of psychiatry. Dr. J. H. Pratt, of Boston, is credited with founding the method of group psychotherapy and the present development in the Boston Dispensary can be considered an outgrowth of his experience over 30 years. As early as 1905, he established group discussions among tuberculous patients, later to be followed by an application of this method to other diseases such as mental diseases, undernourished children, diabetic and cardiac patients. His method was largely inspirational and repressive, and he maintained what he called a "thought control clinic." It was estimated that 68 percent of the patients attending were helped. Improvement was attributed to loss of self-consciousness through identification with the leader, establishing rapport with the leader, and suggestion to the whole group.

The report of Chappel, Stephano, Roger-

son and Pike, who treated a group of patients with peptic ulcer by psychological procedures, is of much significance. They reported favorable results in 31 out of 32 patients after six weeks. Their aims were to control worry, prohibit discussion of condition and symptoms with family and friends, control effort, explain, give self-assurance, suggest, and assure or induce suggestion.

Lazell, at St. Elizabeths, reported the results of group therapy in patients with schizophrenia. His discussions were exceedingly frank and used the analytical viewpoint to explain mental mechanisms. He discussed such subjects as perversion, homosexuality, inferiority, hallucinations, over-compensations, daydreaming and work. Bibliotherapy was also used. He emphasized that other forms of treatment should be used, and reported favorable results.

The Alcoholics Anonymous have learned by discussing their problems mutually to control the alcoholic diathesis. Their success is largely due to inspiration discussions, if we are to accept their reports. Psychiatry might indeed learn from their experiences. Moreno introduced psychodrama as an adjunct to group psychotherapy.

Wender, reporting in 1940, considers the favorable mechanisms operating in group psychotherapy to be intellectualization, patient to patient transference, catharsis and group interaction. He warns against directing the discussion against individuals, but recommends that case histories be used similar to those of the patients, in order that they may assume an objective viewpoint.

Schilder started group psychotherapy at the Bellevue Hospital in 1935, using small groups varying between two and seven. He points out that it is easier to see one's own problems when brought out by another. The patient is given a chance to make his own associations with his experiences when presented in a group. The physician allows others to interpret these, or gives his own

<sup>1</sup> The opinions presented are those of the author and do not represent those of the Medical Department of the United States Navy.

interpretation when he sees fit. Schilder does not allow one individual to monopolize the conversation. Emphasis is placed upon the fact that the human element must be put into each situation which is interpreted and the patients must feel that the physician himself is human. He does not feel the sexes should be mixed for group therapy.

Geraldine Pederson-Krag discusses the unconscious factors in group psychotherapy, and points out that a permissive attitude is developed. It is noted that when an individual becomes a part of a group, the unconscious tends to dominate the conscious, suggestibility increases, suggested ideas become acts, the critical faculty is decreased, and the individual feels stronger motivations.

In a discussion of group psychotherapy in a military setting, Weinberg observed a frank expression, manifestations of transference from member to member and to the leader, and the encountering of resistance. He expressed the opinion that group psychotherapy was no time saver. He used groups of five to seven men who were returnees from combat zones, and care was given to select men of the same intellectual level in the group. Concepts dealt with were the role of the unconscious, somatic responses, guilt reactions, anxiety and dreams. Concepts were discussed as suitable material was produced.

Group psychotherapy was initiated at the United States Public Health Service Hospital, Fort Worth, Texas, partly as a measure of economy of time, and partly because it was the belief of the writer that in group discussions patients could benefit from the experience of others. It was noted that much of both good and bad information was disseminated on the wards during evenings, and it was felt that this could be better directed in a more or less formal discussion with a medical officer. It was instituted as an adjunct to individual therapeutic sessions, occupational therapy and other available methods.

#### GROUP MAKE-UP

All patients used were U. S. Navy officer patients, either active or retired, who were nearing or in a remission from a functional psychosis. They were on an unlocked ward.

The size of the group varied from 8 to 17, and the total number participating was 46. The intelligence in this group was superior, as their estimated I.Q. was between 115 and 144. After the initial group meeting, no set routine was followed for admission to or discharge from the group. Patients left the group as they were discharged from the hospital. Attendance was always voluntary, but was always 95 percent of the maximum.

#### TECHNIQUE AT SESSIONS

The initial discussion occurred in a small lecture room, and it was explained that it was felt that many of their problems were mutual, and that benefit could be obtained from mutual discussion. They were reassured that these discussions would not preclude personal interviews, and were urged to say anything that they pleased. It was noted that the lecture room atmosphere was not conducive to an unrestrained discussion, and therefore the meetings were transferred to a dayroom on the officer's ward, which was equipped with comfortable chairs and divans, thus creating a pleasant, informal surrounding. Chairs were arranged in a circle and effort was made for the therapist not to be conspicuous. Topics discussed were diversified and generally directed toward a mental hygiene level. They included sex hygiene, religion, alcoholic problems, and mental mechanisms such as suppression, repression, hallucinations, delusions, or any associated topics which could be brought up. Although no schedule of discussion was made, an effort was made to discuss the patient's attitude toward his illness after he left the hospital.

#### RÔLE OF THE THERAPIST

Every effort was made not to appear to be the dominating individual in the group, but to assume an interpretive, suggesting rôle, and not to allow more aggressive individuals to dominate the meetings. An effort was made, with success, to induce the human atmosphere from the viewpoint of the therapist. A jovial, good-humored atmosphere was promoted. Questions were frequently asked concerning perversion, sex techniques, etc., which were obviously very personal,



but were handled in a generally detached, impersonal manner.

### OBSERVATIONS

1. The most common experience of the patient was his surprise to learn that the fellow next to him had experienced many of the same difficulties, and that not he alone had heard voices accusing him of abnormal sex acts, etc. They learned that their illnesses were not individualized.

2. Lively arguments occasionally ensued between patients as to whether they had been actually ill or not, and to what extent.

3. Patients developed a dependency upon meetings, and if discussions were missed by the therapist, a hurt feeling was noted.

4. Problems could be discussed in an impersonal manner, and therefore were frequently more acceptable than when discussed in private psychotherapeutic interviews.

5. It appears that patients gain insight more rapidly if they can frankly admit that they were mentally ill in a group.

6. A great deal of catharsis was experienced in describing their individual illnesses. Hostility was released regarding the military service and authority in general.

7. It was particularly noticeable that the group as a whole developed an *esprit de corps*.

8. Questions most frequently asked were: (a) What causes mental diseases? (b) What does my diagnosis mean? (c) What should I tell people about my illness? (d) What is shock treatment? (e) What should I do about having children? (f) When can I go home? (g) When can I get liberty? (h) What is wrong with John Doe (someone they had seen)?

9. Questionnaires requesting critical opinions of the group therapy were all favorable. A twenty-seven-year old officer recovering from a severe depression reported:

Although I do not feel capable of speaking of my own problems in a group just now, and therefore have been able to contribute nothing to the discussions as yet, I feel they are beneficial inasmuch as it leads to the realization that mine aren't the only problems nor am I the only one ever confronted with them. A general realization that things could be worse and that people have solved more difficult problems is helpful too. In the course of the discussions questions are sometimes

answered which I realized were troubling me but which it never had occurred to me to ask about—in a way I had sort of taken them for granted. Further, discussion on purely impersonal subjects gives one confidence in one's own opinions and ability to talk.

A twenty-nine-year old officer who was in a near remission from a schizophrenic episode wrote:

With confidence in the other members of the group and the leader, these discussions have become important to me on a self-help basis.

Also, the informality tends to reassure me that not only other hospitalized patients, but civilians have many problems similar to ours. Since these other people succeeded in overcoming their difficulties, the outlook for our individual cure is much brighter.

I look forward to these group discussions and am happy to be able to expect this chance to 'cherp'.

A forty-nine-year old patient adds:

Group discussions held at the U.S.P.H.S. Hospital have been very helpful to me. Nearly all subjects that concern mental illness have been explained in such simple words that all could and did get a better understanding of the whole problem.

### SUMMARY AND CONCLUSION

The literature concerning group psychotherapy is briefly reviewed. A report of group psychotherapy in a group of officers recovering from functional psychoses is made. Patients' opinions of this method are reported. It is believed that group psychotherapy is especially adaptable to patients of above average intelligence, and can be used as an adjunct to other forms of therapy. It cannot and should not replace other forms of psychotherapy. It has the special advantage of economy of time. Discussions are carried on in an impersonal manner, patients learn that their illnesses are not individualized, and mass catharsis is noted.

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## COMMENT

### BETHLEM

1247—1547—1947

"To all the children of our Mother holy Church, to whom this present writing shall come, Simon, the Son of Mary, sendeth greeting in our Lord, . . . having special and singular devotion to the Church of the Glorious Virgin at Bethlehem, where the same Virgin brought forth our Savior incarnate, . . . in the Honour and Reverence of the same child, and his most meek mother, and to the exaltation of my most noble Lord, Henry King of England, . . . and to the manifold increase of this City of London, in which I was born; and also for the health of my soul, and the souls of my predecessors and successors, my father, mother, and my friends, I have given, and by this my present charter, here, have confirmed to God, and to the Church of St. Mary of Bethlehem, all my Lands which I have in the Parish of St. Buttolph, without Bishopgate of London, . . . to make there a Priory, . . . to say Divine Service there, . . . and specially to receive there, the Bishop of Bethlehem, Canons, brothers, and messengers of the Church of Bethlehem for evermore, as often as they shall come thither and that a Church or Oratory there shall be builded, . . . that the Order, institution of Priors, etc., to the Bishop of Bethlehem and his successors shall pertain for evermore, . . . and Lord Godfrey, Bishop of Bethlehem, into bodily possession, I have indented and given to his possession all the aforesaid Lands; . . .

"This gift and confirmation of my Deed, and the putting to of my Seal for me and mine heirs, I have steadfastly made strong, the year of our Lord God, 1247, the Wednesday after the Feast of St. Luke the Evangelist."

With these words, and many more, Simon FitzMary, sheriff of London, conveyed to the Bishop of Bethlehem, during the reign of Henry III, that parcel of land with its buildings which began the long history of the institution now known as Bethlem Hos-

pital, which this year celebrated the seven hundredth anniversary of its foundation.

It has been stated that Henry VIII, in his quarrel with the Church of Rome, seized the Monastery which had been the property of the Bishop and Church in the Holy Land. Hack Tuke tells us, however, that this seizure by the Crown was carried out in 1375 during the reign of Edward III. (The "for evermore" of Simon, the Son of Mary, had lasted 128 years.) What Henry VIII did was to grant to the City of London in 1547 a charter authorizing the city to administer the hospital "for the relief of the poor people there, according to the meaning of the foundation of the same, or otherwise as it should please the king for better order to devise."

The date when Bethlem was first used as a hospital for mental patients is uncertain, but it seems clear that it was so used long before the time of Henry VIII. Conditions at the institution having come into question, a Royal Commission was appointed in 1403 to investigate. The report of the Commission stated that six men of unsound mind were confined there. This appears to be the earliest definite evidence of mental patients in Bethlem Hospital. That the treatment methods then in vogue had been duly provided was indicated by the further mention in the report of "Six chains of iron, with six locks; four pairs of manacles of iron, and two pairs of stocks."

Tuke, who investigated the early history of Bethlem, points out that there existed two small hospitals to which he is inclined to "grant their priority as special houses for deranged persons." One of these was founded in the parish of Barking (1370) "for the sustentation of poor Priests and other men and women that were sick of the Phrenzie"; the other was at Charing Cross. The records show, however, that the latter belonged to Bethlem Hospital, being relinquished in 1830 to permit the development of Trafalgar

Square and the erection of the National Gallery. "We know, then," Tuke concludes "that from about 1400—probably earlier—Bethlem received lunatics, on however small a scale; and we have here an explanation of the fact which has occasioned surprise, that before the time of the charter of Henry VIII, whose name is inscribed over the pediment of the existing building, the word 'Bedlam' is used for a madman or mad-house."

The original Bethlem Hospital, although somewhat enlarged from time to time, had proved entirely inadequate and a new hospital with capacity for 150 patients was opened in Moorfields in 1676. This second Bethlem was an imposing structure and is said to have excited the ire of Louis XIV because it was planned after the Tuileries. "It certainly conveys ideas of grandeur," records Smith's "Ancient Topography of London." "Indeed, it was for many years the only building which looked like a palace in London." In this building for the first time male and female patients were segregated.

It is significant of the public attitude of the seventeenth century that surmounting the pillars at the gateway to the hospital grounds were two stone figures, one representing raving madness, the other melancholy, carved by the sculptor Caius Cibber, father of Colley Cibber, the actor. These effigies, so singularly out of place, later found more suitable lodgment in the South Kensington Museum.

By the end of the eighteenth century the hospital in Moorfields had outlived its usefulness, and the third Bethlem was opened in St. George's Fields in 1815, designed for 200 patients.

The fourth and present Bethlem Hospital, favorably located in Monks Orchard, ten miles from Charing Cross, and having accommodation for 250 patients, was opened in 1930.

To the literary minded the word Bethlem, or Bedlam, will recall "Poor Tom" of King Lear; the art devotee will think at once of the "Rake's Progress"; the medical historian will remind us that John Haslam, appointed resident apothecary to the institution in 1795, published the earliest report of a case of dementia paralytica (1799).

For five and a half centuries mental patients have had admission to Bethlem Hospital. The long history reflects the changing views of both the medical profession and society at large as to the nature of mental disorder, the status of the mental patient, and methods for his management and treatment. It was not until 1632, according to Tuke, that first mention is made of a medical man at the head of the institution, although one John Arundell, "more priest than physician," the *British Medical Journal* says, was associated with the hospital in the fifteenth century. Most important of the early medical heads was Edward Tyson, who was physician to Bethlem from 1684 to 1703. With him the reforms in the care and treatment of patients really began—and this, 100 years before the innovations of Pinel and Tuke, who are commonly thought of as standing at the threshold of the modern period of hospital care. For a century and a quarter (1728-1853) four generations of the Munro family dominated the scene, the headship of the hospital passing from father to son. The second and third Munros both had to do with the treatment of King George III.

Many distinguished names in British psychiatry have been associated with this venerable institution, in its fourth edition a thoroughly modern hospital which has become one of the world centers for postgraduate training. Compared with its career of centuries, the hospitals of the western world are as of yesterday.

#### CALIFORNIA CRIME STUDY COMMISSIONS

Pursuant to an act of the California legislature, approved July 8, 1947, Governor Earl Warren, by executive order dated November 1, 1947, created 5 special crime study commissions. These commissions, each con-

sisting of 5 persons, are to study, respectively, criminal law and procedure; adult corrections and release procedure; juvenile justice; organized crime; and social and economic causes contributing to crime and de-

linquency in California. The final reports of the studies, with recommendations, are to be completed not later than July 1, 1949.

In launching this program the Governor held a 2-day conference on crime and juvenile justice at Sacramento on November 17 and 18, to which were invited representatives of the judiciary, law enforcement officials, education, and representatives of official and voluntary agencies that minister to the social needs of California communities. More than 1,000 persons accepted the Governor's invitation to attend and participate in the discussions pertinent to the respective commissions' interests.

Each commission is expected to pursue its

studies in more or less autonomous fashion, the final results being coordinated by the State Department of Correction for eventual submission to the Governor and the legislature.

The Governor's long experience as a prosecuting attorney has stimulated his interest for the development of a more satisfactory program for dealing with crime and juvenile justice in California. The great increase in population since 1940 has also stimulated the need for taking inventory of the crime situation within the state and the formulation of more adequate measures for dealing with potential needs in this field.

W. L. T.

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#### NOTICE

Hotel accommodations for the Washington meeting of The American Psychiatric Association (May 17-20, 1948) are to be made through the offices of the Association, Room 924, 9 Rockefeller Plaza, New York 20. While the Statler Hotel will be the headquarters, it will have only a limited number of rooms available. Therefore, most members will have to be assigned to other hotels nearby. Ample guarantees on rooms have been made so that everyone will be comfortably housed. However, the attendance will be large, so please do not delay in notifying the office of the Association of your needs and the length of your stay.

## NEWS AND NOTES

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NATIONAL ADVISORY MENTAL HEALTH COUNCIL.—Among the recommendations made by the National Advisory Mental Health Council at its meeting in Washington in November, in order to augment the present program of the United States Public Health Service authorized under the Mental Health Act, which provides for training grants and stipends to universities, hospitals, and clinics to train graduate students in psychiatry, clinical psychology, psychiatric social work, and psychiatric nursing, were the following suggestions.

1. Emphasis should be placed first on the improvement and then the expansion of existing training programs, with the establishment of new training facilities taking third place.

2. Applicants for training stipends in the four specialty fields who plan to follow careers of public service, research, or teaching should be given preference.

3. Scholarships should be awarded to senior medical students in Class A medical schools who wish to specialize in psychiatry.

4. When possible, grants should be awarded to Class A medical schools for the development and stimulation of psychiatric teaching at the undergraduate level, but under certain conditions.

5. Grants and stipends for training in clinical psychology should be given only to those institutions which offer doctorate or post-doctorate training programs in clinical psychology.

6. Grants should be awarded to institutions offering an accredited 2-year social work course, in order that they may develop a psychiatric social work curriculum, and also to accredited one-year schools under certain conditions. Training stipends should not be awarded to students in the first year of graduate social work training.

7. Support for training in psychiatric nursing should continue to be given only at the head-nurse level and above.

The Council appointed chairmen for three groups which serve the Council in an advisory capacity: Dr. William Malamud to

the Committee on Training, Dr. S. Alan Challman to the Committee on Community Services, and Dr. Nolan D. C. Lewis to the Research Study Section.

Applications for training grants should be sent to the Training and Standards Section, Mental Hygiene Division, U.S.P.H.S., Washington 25, D. C., and for research grants to the Research Projects Director, Mental Hygiene Division.

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NATIONAL COMMITTEE FOR MENTAL HYGIENE, 1947 ANNUAL MEETING.—On November 12 and 13, 1947, the National Committee for Mental Hygiene held its regular annual business meeting and scientific conference, in New York City. The meeting was concerned with the major issue facing the world at the present time, that is, preparing for world citizenship, and took its lead from the preamble of UNESCO indicating that the minds of men are the essential focus in developing world citizenship.

The first day dealt with the shorter perspective, the forces that mold the minds of individuals. Those of the home were discussed by Dr. Milton J. E. Senn; those to be found in the schools, by Dr. Daniel A. Prescott; and those emanating from the job were analyzed by Dr. F. W. Dershimier.

A special session in the afternoon considered the forces in the church; this reflected a conference held in Washington in the spring of 1947, of some 15 psychiatrists and 15 clergymen. In this conference both groups recognized that they were participating in a division of labor and that an understanding of the whole labor is necessary for the participants in the partnership to work effectively.

The second day dealt with the longer perspective. Dr. Sol W. Ginsburg gave a picture of the extent of the problem as reflected by the responses of the readers of an advice column and articles on personal problems. Dr. Frank Fremont-Smith pointed out some of the fundamentals of human behavior that are concerned with democratic citizenship, and Dr. Kenneth Clark inter-

preted the tensions between groups that have to be taken into account in a world citizenship that extends over various cultures.

In the afternoon, the program of the International Committee for Mental Hygiene was described and interpreted by Dr. J. E. Meakins and a plea presented to the audience to take part in the preparatory commissions upon which the program of the International Congress in London in August, 1948, will be based. The World Health Organization at present is a projected rather than an accomplished reality. All that we have to go on today is the charter as it has been set up. The mental hygiene potentialities have not yet been accepted or even formulated. Dr. Harry Stack Sullivan, taking advantage of the freedom offered by this charter, outlined work that could be done under it.

The annual luncheon of the National Committee held on the second day included a tribute to Dr. James S. Plant by Mr. A. L. van Ameringen and the presentation of the Lasker Award. The main speaker of the luncheon, Dr. Alan Gregg, pointed to the responsibility of every person for the successes and failures of government in the mental hygiene field.

At the business meeting of the National Committee a new Board of Directors and a new Council were elected, as provided for in recently revised by-laws. The Board of Directors will be composed of 15 persons largely from the New York area who can be fairly regular in attending Board meetings. The Council is composed of 51 members, comparable to Board members, but so situated as to be unable for the most part to attend regularly. The members of the Council will, however, be eligible to attend all board meetings and will receive the agenda in advance and the minutes of such meetings subsequently and will serve essentially as Board members through correspondence.

**WINNERS OF 1947 LASKER AWARD.**—Presentation of the 1947 Lasker Award for outstanding service to the nation's mental health, given this year for "contributions to popular adult education in mental health, especially concerning parent-child relationships," was made on November 13 at the 38th annual meeting of the National Committee for Mental Hygiene in New York. Lawrence K. Frank, director of the Caroline

Zachery Institute of Human Development, New York City, and Catherine Mackenzie, parent-child editor of the New York Times, will share the fourth annual Lasker Award of \$1,000.

Miss Mackenzie is cited for her writings in the New York Times and elsewhere and for "her continuous and effective campaign of education on the care and emotional development of children." "By her ability to synthesize and integrate where differences of opinion exist, Miss Mackenzie has won the confidence of the press and the mental health profession," Dr. George S. Stevenson, the Committee's medical director, commented. Her column is posted in schools and social agencies and is often assigned as required reading in university classes.

Mr. Frank is honored for a variety of activities in this field covering 26 years, "for his impetus and direction to the entire field of child development, parent-child relationships, and adult education." At the Caroline Zachery Institute he directs lecture courses, research, and the establishment of fellowships, and supervises field work covering all aspects of child development from infancy to vocational guidance. He is a prolific writer on the subject; one of his widely read pamphlets, "Fundamental Needs of the Child," has been translated into many languages and thousands of copies have been distributed.

**THE SALMON MEMORIAL LECTURES, 1947.**—Dr. Harold Dwight Lasswell, internationally known political scientist and Professor of Law at Yale University, was presented by the Salmon Committee on Psychiatry and Mental Hygiene at the New York Academy of Medicine, November 12-14, 1947, in three lectures, soon to be published, on the dynamics of power and personality.

Defining power in terms of interpersonal relations and of those deprivations to individuals and groups which are expected to follow the breach of a pattern of power, Dr. Lasswell emphasized the importance of developmental and environmental forces in the shaping of power-seeking personalities. Such personalities accentuate the value of power in relation to other values in the social process and pursue power as a compensation against lowly images of the self.

Since those who hold power do so only

so long as there is a continuing stream of empowering responses, the importance of choosing and supporting, as well as of rearing, leaders who can protect and perfect the values and institutions of democracy is obvious. It is a problem equivalent to the development of *social health*, by the diffusion of the kind of knowledge and education which will enable men to make rational choices of leaders in the defense and perfection of a free society. Hence, social psychiatry and other "policy sciences" such as law, education, and the social disciplines at large can contribute effectively to its solution. Dr. Lasswell favors a concerted scientific effort, on the widest possible scale, to clarify the impact of institutions on the formation of character and personality, with a view to developing new instruments of democratic education.

Since the accentuation of power is a modality of compensation against estimates of the self as unworthy and unloved, personalities fit to participate in the democratization of society must love themselves enough to love all. Effort must therefore be directed to the discovery of ways of handling children which would, in fact, aid in the formation of democratic character, transmit democratic principles, and foster the acquisition of democratic skills. For, although the world community today is adept in pursuing the pathways of danger, it is inadequately oriented to those which, implementing the value-shaping and value-sharing potentialities of a truly democratic commonwealth, should lead to lasting peace.

**ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE.**—At the December meeting of the Association in New York the following officers were elected for the coming year:

*President:* Dr. Henry Woltman of the Mayo Clinic.

*Vice-President:* Dr. Roland H. Mackay of Chicago.

*Second Vice-President:* Dr. Houston Merritt of Montefiori Hospital, N. Y.

*Secretary-Treasurer:* Dr. Clarence C. Hare of the N. Y. Neurological Institute.

*Assistant Secretary:* Dr. Rollo J. Masselink.

**DR. NORMAN CAMERON APPOINTED PROFESSOR OF PSYCHIATRY.**—The University of Wisconsin Medical School has appointed Dr.

Norman Cameron professor of psychiatry. He will introduce required work in medical psychology and psychopathology for first and second-year medical students.

Dr. Cameron has long been connected with the University of Wisconsin faculty, having served as assistant professor of psychology for several years before taking his medical degree. He has also been attached to the departments of psychology and psychiatry at Cornell Medical College and to the department of psychiatry in the School of Medicine, Johns Hopkins University.

**VETERANS ON DISABILITY COMPENSATION ROLLS.**—The Veterans Administration announces that on June 30, 1947, there were 1,728,516 World War II veterans on disability compensation rolls. Of these, 71% were for disabilities resulting from general medical and surgical cases; 27.5% were neuropsychiatric cases; and the remaining 1.5% were tuberculosis cases. In the neuropsychiatric category, functional disorders of the nervous system were the reasons for nearly two-thirds of all the cases. Psychiatric disorders and organic disorders of the nervous system make up the other third, in about equal proportions.

**AMERICAN GROUP THERAPY ASSOCIATION.**—The 1948 annual meeting of the American Group Therapy Association will be held at the Hotel Commodore in New York City on April 11. The program will include a luncheon session followed by a case presentation and discussion, and also an evening session devoted to reports and explanation of current practices and trends in group therapy. A copy of the preliminary program and further information may be obtained by writing to the office of the Association, 228 East 19th St., New York 3, N. Y.

**PRESENTATION OF A STATUE OF SIGMUND FREUD.**—To the New York Psychoanalytic Society and Institute there was presented on November 12, 1947, a statue of Sigmund Freud. This was the work of the sculptor, Olem Nemon, and given by an anonymous Belgian in recognition of a debt of gratitude to the United States and to Freud. At the unveiling ceremonies, Dr. Sandor Lorand



was chairman, and two addresses were given. Dr. A. A. Brill spoke on "Freud in America," and Dr. Paul Federn on "Freud amongst Us—His Followers."

The New York Psychoanalytic Institute has a faculty of 50 physicians and a student body of about 150. It will soon open a treatment center and is now expanding its teaching courses.

**AMERICAN ASSOCIATION ON MENTAL DEFICIENCY.**—The 1948 annual meeting of this association will be held in Boston at the Copley Plaza, May 18 to 22, instead of the hotel and dates that were announced in the August JOURNAL. This meeting will commemorate the hundredth anniversary of the first school for mental defectives in this country and it will be the first international congress on mental deficiency.

**STONY LODGE APPROVED FOR RESIDENCY TRAINING.**—The Stony Lodge Sanitarium at Ossining, N. Y., has recently been approved for psychiatric residency training. There are two openings available at this time; these are best suited to men who have had two years of experience in state hospitals, Army, Navy, or Veterans Hospitals and who would want to complete their third year of required training for the American Board of Neurology and Psychiatry.

The program at Stony Lodge includes intensive psychotherapy as well as insulin and electroshock therapy. Inquiries may be made directly to the physician-in-charge, Dr. Bernard C. Glueck, Jr., Stony Lodge, Ossining, N. Y.

**JOB INFORMATION SERVICE FOR PSYCHIATRIC SOCIAL WORKERS.**—With the cooperation of the National Committee for Mental Hygiene a plan has been formulated for the establishment of a job information service, to be undertaken by the American Association of Psychiatric Social Workers. It is felt that the apparent shortage of personnel is due in part to the fact that there has been no nation-wide system for bringing clinical job openings to the attention of qualified personnel. A monthly bulletin, which will be distributed to members of the A.A.P.S.W., will list all psychiatric social work positions

that come to the Association's attention. Those who wish to list positions available should write for the appropriate forms and for information about fees to the American Association of Psychiatric Social Workers, 1790 Broadway, New York 19, N. Y.

**IN HONOR OF DR. STRANSKY'S SEVENTIETH BIRTHDAY.**—To pay tribute to Professor Erwin Stransky of the University of Vienna, whose seventieth birthday occurred on July 3, 1947, his friend and colleague, Dr. Josef K. Waldschütz, has kindly supplied some of the more significant features of the career of this distinguished scientist who has had so much to do with the development of psychiatry in his native country.

Dr. Stransky received his Doctor's degree from the University of Vienna at the exceptionally early age of 22. He was for many years assistant to Professor Wagner-Jauregg, and among his other great teachers were Obersteiner and Frankl-Hochwart. At the age of 37 he became associate professor of neurology and psychiatry in the University of Vienna. He served at the Front as medical officer in the Austrian army during World War I.

Following Hitler's invasion of Austria in 1938, Professor Stransky, because of "non-Aryan descent," was deprived of all his official connections and rights. His dwelling was in the line of fire of the Russians on one side and their western allies on the other but miraculously escaped. He and his wife, however, were subjected to extreme hardship, and it was through the self-sacrificing efforts of Mrs. Stransky and a few devoted friends that Dr. Stransky's transportation was prevented.

It is a pleasure to record that following the collapse of the Hitler regime he was able to resume his scientific and humanitarian work. In the spring of 1945 he was appointed chief of the Vienna Neurological Clinic Rosenhügel and by his personal efforts built up again this institution from a bombed-out ruin to one of the important neurological centers of Europe. Early in 1946 he was given the title of full professor in the University of Vienna, and on attaining his seventieth birthday was appointed professor emeritus.

Professor Stransky's bibliography includes more than 200 original studies. His textbook,

*Introduction to Mental Hygiene*, was one of the earliest treatises on the subject.

Dr. Stransky has been an Honorary Member of The American Psychiatric Association since 1933. The JOURNAL would like to add

its word of appreciation and tribute to those of his colleagues and friends and to those of the academic and civil authorities who paid honor to him on the occasion of his seventieth birthday.

#### RESOLUTION RELATING TO "HOFHEIMER PRIZE"

WHEREAS, The Estate of Lester N. Hofheimer, deceased, proposes a donation or contribution of \$25,000 to The American Psychiatric Association for the purpose of providing an annual award for outstanding contribution of a research nature in the field of psychiatry or mental hygiene; and

WHEREAS, The Council of the Association recommended the acceptance of said special fund, and approved the following form of resolution submitted to the Association for adoption at its annual meeting, held at New York, New York, on May 21, 1947, the said resolution reading as follows:

*Be It Resolved*, That there shall be and hereby is created a Group to be known as the Hofheimer Prize Board, consisting of eight Fellows and Members of The American Psychiatric Association, to be appointed by the President. The President of the Association shall serve as a member of the Board during his term of office, or if he be already a member of the Board, the President-Elect shall serve ex-officio as a member of the Board. The original Board members shall serve continuously for three years, after which the first two-named appointees shall retire and shall be replaced by two other Fellows or Members of the Association to serve a four-year term in their place and stead. The Board shall annually nominate three Fellows or Members from whom the Council shall select two; thus two members shall retire annually; and their successors be appointed for a term of four years, except as herein-above provided. The retiring members of the Board shall be ineligible for re-election for one year immediately following their retirement. Vacancies caused by death or resignation shall be filled by the Board in line with the procedure herein prescribed; and the President of The American Psychiatric Association will give notification of the names of the proposed new members to the three persons now serving as Executors of the Estate of Lester N. Hofheimer, deceased, or to the surviving or substituted Executors of said estate; and

*Be It Further Resolved*, That the Hofheimer Prize Board shall award each year at the annual meeting of the American Psychiatric Association a prize award to be known as the "Hofheimer Prize," in the amount of \$1,500, to a citizen of the United States or Canada, not over forty years old at the time of his publication, or submission for publication, of an outstanding contribution of a research nature in the field of psychiatry or mental hygiene.

The award shall apply only to work published within a period of three years prior to the date of the award. The award may be made to each member of a group, instead of to an individual, provided that the majority of the group are citizens of the United States or Canada, and that the median age of the group did not exceed forty years at the time of publication. Such annual award of \$1,500 shall be equally divided among the members of the group. Each recipient or recipients, in the case of a group award, shall receive a certificate (the expense for which shall be paid from the fund) indicating that the "Hofheimer Prize" has been made possible under terms of the Will of Lieutenant Lester N. Hofheimer, deceased. The award shall not be confined to Fellows or other members of the American Psychiatric Association. The Board may, in its discretion, omit the prize award for any one year, but the making of the award shall not be omitted for any two successive years; and

*Be It Further Resolved*, That the \$25,000 shall be placed in a separate fund and invested in United States Government securities or deposited in New York State savings banks, and all income therefrom shall be added to the principal of such fund; and, whenever at any time the remaining portion of the fund, including the income therefrom, shall become less than \$1,500, the said balance shall revert to the general funds of The American Psychiatric Association.

*Now, Therefore*, The American Psychiatric Association at its annual meeting for 1947 agrees to accept, and does hereby accept, said donation or contribution of \$25,000, and adopts the aforesaid resolution as the formal act of the Association this 21st day of May, 1947.

SAMUEL W. HAMILTON,  
*President.*

Attest:

LEO H. BARTEMEIER  
*Secretary.*

The President appointed the following Fellows of The American Psychiatric Association to serve as the Hofheimer Prize Board: Dr. Franz Alexander, Dr. Harry C. Solomon, Dr. George E. Daniels, Dr. Thomas A. C. Rennie, Dr. David Levy, Dr. George S. Stevenson, Dr. John C. Whitehorn, and Dr. Nolan D. C. Lewis.

## THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

The following were certified at Chicago, Illinois, October 27-28, 1947.

### PSYCHIATRY

(By Examination)

Ackerman, Albert, 2810 O St., S. E., Washington 20, D. C.  
 Adelson, Edward T., 201 Keer Ave., Newark 8, N. J.  
 Ault, Charles Carter, Vets. Admin. Hosp., Little Rock, Ark.  
 \*Barnard, Ruth I., Menninger Clinic, Topeka, Kansas.  
 Bennett, Edward K., Halloran Veterans Hospital, Staten Island, N. Y.  
 Bergman, Murray, Newark State School, Wayne County, Newark, N. J.  
 Binder, Morris, Veterans Hospital, Northport, New York.  
 Braverman, Aaron Harry, Veterans Administration Hospital, Bedford, Mass.  
 Bryan, Elizabeth Lynn, Brooklyn Regional Office—Vet. Admin. 35 Ryerson St., N. Y.  
 Byrnes, Allen W., Box 157 Richland, Michigan.  
 Carotenuto, Ralph J., 380 Sterling Place, Brooklyn 17, New York.  
 Center, Abraham H., 17-A West Gordon Street, Savannah, Georgia.  
 Chaplik, Michael, 51 E. 73rd Street, New York 21, New York.  
 Cohen, Newman, 475 Commonwealth Avenue, Boston 15, Mass.  
 D'Angelo, Ernani, 90-26 150th St., Jamaica, New York.  
 Doering, John A., Delaware State Hospital, Farnhurst, Delaware.  
 Dorsey, John Morris, 3743 Brush St., Detroit, Michigan.  
 Dredge, Thomas Joseph, Greystone Park, New Jersey.  
 Durante, Raphael H., 1930 Snyder Avenue, Philadelphia 45, Penna.  
 Eichert, Arnold H., Springfield State Hospital, Sykesville, Md.  
 Faguet, Benjamin B., 378 Golden Gate Ave., San Francisco 2, Calif.  
 Ferber, David M., 2744 Bedford Ave., Brooklyn 10, New York.  
 Foltz, Louis M., 812 Heyburn Building, Louisville 2, Kentucky.  
 Fox, Thomas Holland, Fort Mead, South Dakota.  
 Gallagher, William Hanna, Traverse City State Hospital, Traverse City, Michigan.  
 Gardiner, Harry M., Box A, Harding, Mass.  
 Goldfarb, Simon L., Vet. Admin., Mental Hygiene Clinic, 95 Pearl St., Hartford 4, Connecticut.  
 Goldfarb, Walter, 105 West 55th Street, New York 19, New York.  
 Grassi, Michael O. A., 731 North 63rd St., Philadelphia, Penna.  
 Green, Sydney H., 115 Edison St., Corte Madera, California.  
 Greenbaum, Philip Samuel, 2839 East 2nd Street, Tucson, Arizona.  
 Hall, William Stone, S. C. State Hospital, Columbia, South Carolina.  
 Holden, Isidore, Wadsworth Vet. Admin. Hosp., Los Angeles, California.  
 Holder, Charles O., Box A, Kalamazoo, Michigan.  
 Holmes, Mansell B., Vet. Admin. Hosp., Tualoosa, Alabama.  
 Imburgia, Frank J., 6826 Greenleaf Street, Parma Heights, Ohio.  
 Jahrreiss, Walter O., 3703 Clark's Lane, Baltimore 15, Maryland.  
 Johnson, Simon Overton, Supt., Lakin State Hosp., Lakin, West Virginia.  
 Jones, Ernest Frederick, Vet. Admin. Hosp., Marion, Indiana.  
 Kaplan, Louis, 2102 Delancey Place, Philadelphia 3, Penna.  
 Karlen, Saul Howard, 51 East 73rd Street, New York 21, New York.  
 Kelley, Kenneth M., 2015 43rd Ave., San Francisco, California.  
 Longan, Robert Coleman, Jr., 810 West Franklin Street, Richmond, Virginia.  
 Lyons, William H., 611 Kales Bldg., 76 W. Adams, Detroit 26, Michigan.  
 Marcovitch, Joseph, Vet. Admin. Hosp., Marion, Indiana.  
 McKendree, Oswald John, 1213 Court Street, Utica, New York.

\* Denotes Complementary certification.

McLendon, Sol Brown, S. C. State Hospital, Columbia, S. C.  
 Miller, Edward Ray, 8350 Wilshire Boulevard, Beverly Hills, Calif.  
 Morgan, John D'Arcy, Vet. Admin., American Lake, Washington.  
 Murphy, James M., Willard State Hospital, Willard, New York.  
 Neustadt, Elsie S., 27 Avon Way, Quincy 69, Massachusetts.  
 O'Connell, John Joseph, 197 Fourth Avenue, Ottawa, Canada.  
 Odenwald, Robert P., 53 Park Place, Suffern, New York.  
 O'Gorman, William D., 1104 City National Bank Building, Omaha, Neb.  
 Olsen, Albert Lamoin, Vet. Hosp., Fort Custer, Michigan.  
 Perrin, Hellen Joyce, 1117 Equitable Bldg., Des Moines, Iowa.  
 Primakow, Max J., Vet. Admin. Center, Wood, Wisconsin.  
 Prudhomme, Charles, 1752 17th Street, N. W., Washington, D. C.  
 Rayburn, Charles R., Central State Hospital, Norman, Oklahoma.  
 Salan, Irving, Rockland State Hospital, Orangeburg, New York.  
 Schlan, Louis, 25 E. Washington St., Chicago 2, Illinois.  
 Shelton, Henry Z., Rockland State Hospital, Orangeburg, New York.  
 Sloan, Roy C., 12201 Texas Avenue, Lubbock, Texas.  
 Stephens, Willie Mary, 55 E. Washington, Chicago, Illinois.  
 Toll, Nina, Connecticut State Hospital, Middletown, Conn.  
 Vallee, Clarence A., Batavia Veterans Hosp., Batavia, New York.  
 Wagner, Robert Lowell—Cdr(MC) USN, U. S. Naval Hospital, Long Beach, California.  
 Wayne, David Michael, Box 161, Fort Mead, South Dakota.  
 Weber, Joseph E., 238 W. Wisconsin Avenue, Milwaukee 3, Wis.  
 Wenger, Paul, Bedford V. A. Hospital, Bedford, Mass.  
 Wilkin, Mabel G., 9 Pce Rd., Woodhaven, Bethesda 14, Maryland.  
 \*Winkler, Emil Guenther, 2421 27th St., Long Island, New York.  
 Winn, Joseph A., 405 East 72nd Street, New York 21, New York.  
 Worthington, Robert L., Menninger Sanitarium, Topeka, Kansas.  
 Yood, Bernard, 481 Beacon St., Boston, Mass.

### PSYCHIATRY

(On Record)

Trevisano, Anthony, Veterans Administration, Castle Point, New York.

### NEUROLOGY

(By Examination)

Burrows, Ernest A., 116 Waterman Street, Providence, R. I.  
 \*Epstein, Carl M., The Menninger Foundation, Topeka, Kansas.  
 \*Futterman, Samuel, Vet. Admin., 1031 So. Broadway, Los Angeles 15, Calif.  
 Magladery, John William, Johns Hopkins Hospital, Baltimore, Maryland.  
 Roberts, Lewis Alan, Bellevue Psychiatric Hosp., New York, New York.  
 Taefner, John Hallman, 6342 Carnation St., Philadelphia 44, Pa.  
 Weaver, Samuel Wood, 1205 No. Broadway, Santa Ana, California.

### NEUROLOGY AND PSYCHIATRY

(By Examination)

Osborne, Raymond L., 140 East 54th St., New York 22, New York.  
 Simon, John Leopold, 15 East 75th Street, New York 21, New York.  
 Steinberg, Miguel, 240 Central Park South, New York 19, New York.

\* Denotes Complementary certification.

## BOOK REVIEWS

THE SECOND FORTY YEARS. By *Edward J. Stieglitz, M. D.* Philadelphia and New York: J. B. Lippincott Company, 1946. Foreword by Anton J. Carlson, A. M., Ph. D., LL. D., M. D., Sc. D.

A laudatory foreword by Anton Carlson suggests that the book is well worth reading. This viewpoint is borne out as one goes through the book, and in general it can be said that the book is packed with a wide variety of information, that it is interestingly written, and that most of it can be understood by the average reader. The author has read widely on the subject; he has assembled his facts in an interesting manner; and the reviewer would agree with Carlson that "it is a MUST book for all men and women past forty."

The author starts out with a discussion of what one means by aging or growing old, and shows how aging is something that starts from the time of birth and goes on until the time of death. The popular fallacies and misunderstandings with regard to the aging process are discussed. The reader is told that much that happens in the second 40 years of life is dependent upon what happened during the first 40 years and that it is possible, within limits, to control conditions. The author gives proper emphasis to heredity, physical disease, and psychological factors (such as emotional tension) as factors which influence the aging process. There are chapters on "Life With a Handicapped Heart"; "High Blood Pressure"; "Nutrition in Later Years"; "Sex and Age"; "The Question of Cancer"; and "The Point of View." Many worthwhile constructive suggestions are made, and in general the reader is given good advice and many of his fears are dissipated.

The reviewer finds only two places where he would make any specific criticism. In the discussion of rest and fatigue, the author does not seem to take into account some of the latest work which indicates that chronic invalidism is frequently avoided by rapidly getting patients up and about. There is constant insistence that the individual must take a long period of rest after any sickness. According to the author's claim, "for each five years that we have lived, we require an additional day for an equivalent extent of postinfection rehabilitation." He concludes, therefore, that a man at sixty requires 12 days to accomplish the same degree of repair that a child of five requires. Taken literally it would seem that this advice would prolong convalescence unduly in many of our older persons.

The discussion of mental disease in senility is in many respects good, but the attempt to differentiate arteriosclerotic dementia from senile dementia on the grounds that the arteriosclerotic has a "very definite tendency towards the development of paranoid attitudes and delusions of persecution," and the statement that the arteriosclerotic tends to

turn against those nearest and dearest to him do not seem to be an adequate differentiation. These, however, are very minor criticisms in what is an excellent book. It is recommended that all psychiatrists should familiarize themselves with this book and that it should be prescribed freely for older patients to read.

KARL M. BOWMAN, M. D.,  
San Francisco.

INTRODUCTION À LA CRIMINOLOGIE. By *Etienne de Greef.* (Brussels: Vandenplas, 1946.)

The author is professor in l'Ecole des Sciences Criminelles de Louvain and a disciple of Louis Vervaeck. This volume was finished in 1944 and is a second edition, the first having appeared in 1937. In essence the book is a sociological analysis and interpretation of the factors conducing to and supporting criminal behavior.

Prof. de Greef considers first the usual sociological factors: illiteracy, economic (wage or income level), social change, alcoholism, divorce, the press, the cinema, and seasonal (in terms of both cold-war rhythm and more obscure meteorological conditions). He then discusses what he terms "le milieu inéluctable": geographic factors, as locality, city, housing; and familial relationships with special reference to harmonious vs. disharmonious. In all of this there is no radical departure from the conventional viewpoint, i.e., that socio-economic factors are all important, are all effective mechanisms in the setting up of the potentially criminal behavioral situation. If anything, de Greef seems to feel that the far more personal family-circle picture is a prepotent factor.

The discussion of delinquency in the "milieu choisi" is well done, since de Greef deals with the world that the delinquent creates for himself—as an escape—or that is created for him—by other delinquents or by the alluring pictures of fiction and the cinema. The "world of choice" is the dream-world where the delinquent is freed of all his bonds, as it were: bonds of family or social restraint, bonds of personal inadequacy, bonds of conventional restriction, and so on.

The chapter on the anatomico-physiological "personality" of the criminal is out of date. Lombroso, Vervaeck, Kretschmer, and a few others are given as authorities. The old concept of "stigmata" is at least tacitly approved, in references to types of ear, nose, mouth, and so on. Recent studies by Goring, Hooton, Sheldon, and others are either not cited or mentioned only in passing.

This book does not pretend to cover any phase of the field of scientific crime detection. It is simply a discussion, and a not very up-to-date one at that, of criminology as a sociological phenomenon.

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THE BIOLOGY OF SCHIZOPHRENIA. By Roy G. Hoskins, M.D. (New York: W. W. Norton & Company, Inc., 1946.)

This monograph, which represents the Salmon Lectures of 1945, is already familiar to most readers of psychiatric literature. The previous 12 annual series of lectures were delivered by psychiatrists; it is refreshing and stimulating to have the approach and thoughts of a physiologist in the biology of such a common failure of nature as occurs in schizophrenia.

Immaturity is emphasized in the genesis of the schizophrenic person. It is stated, "Organic heredity and social heredity play intermingled and often indistinguishable roles in the determination of the characteristics of the maturing individual."

The author summarizes briefly his experience of 18 years of research into the psychosomatic aspects of schizophrenia, including the endocrine relationships. The prevalence in the schizophrenic syndrome of general lassitude, low blood pressure, reduced oxygen assimilation, mild anemia, abnormal metabolism, unusual physicochemical findings, and sluggishness of sympathetic responses is related to inner tension, which of course has deeper meanings.

Defective homeostatic equilibria are often determined by attitudes, a factor which has heretofore been neglected. The author could give us much more about this correlation in his "Biological Appraisal of Schizophrenia." He himself is not completely satisfied with his thesis of "immaturity," and refers to alternative possibilities, such as a specific pathology which might lead to "decompensation"; indeed reference is made to "decompensated neurosis."

The author urges that future research approaches should include, first of all, "an adequate appraisal of the value of the various therapeutic modalities that are now in vogue. Aside from a certain amount of inadequate evidence regarding the value of the shock therapies we know practically nothing in a decently quantitative way as to the value of any. Indeed, we do not even know how good psychiatry is for the psychotics. And while faith is an admirable human attribute, it is not an adequate basis for therapy."

There are important challenges to psychiatrists with which every student of psychiatry should be acquainted. Too little is known about this very core of hospital psychiatry. These challenges of the author are wholesome and stimulating.

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MONGOLISM AND CRETINISM: A STUDY OF THE CLINICAL MANIFESTATIONS AND THE GENERAL PATHOLOGY OF PITUITARY AND THYROID DEFICIENCY. By Clemens E. Benda, M.D. (New York: Grune & Stratton, 1946.)

This monograph is the result of 10 years of research on so-called mongolism. The author discusses cretinism parallel with the main subject as a means of contrasting a condition poorly under-

stood with one the nature of which is better known. The problem of mongolism is an eminently practical one. Statistically one might expect 2.3 mongoloids per each thousand of newborn infants. The cardinal conclusion reached by the author is that mongolism is a disturbance of visceral, somatic, and mental growth and development of the individual always associated with the deficiency of pituitary function. The author regards mongolism as a pituitary counterpart of thyroid cretinism and calls it pituitary cretinism. The congenital failure of pituitary functions leads to failure of growth manifest in the characteristic acromicria—the opposite of acromegaly. In the first chapter the author discusses the history, frequency, and terminology of mongolism and cretinism and points out the misconception under which the earlier studies of mongolism have been undertaken. The term, "mongolism," with its ethnic connotation is a misnomer which, nevertheless, influenced a great deal of speculative thinking of physicians in earlier times. In the second chapter he contrasts the physical characteristics of mongoloids and cretins. The term mongolism was suggested to Langdon Down in 1866 by the quasi-mongolian slant of the palpebral fissure in mongoloid children. The author shows clearly that palpebral fissures in mongolism have nothing in common with the palpebral fissure of the Mongolian race. The apparent slanting is due to the persistence of the fetal "plica marginalis" normally present in many newborn but in mongoloid infants persisting into adult life. The retardation or arrest of growth and development manifests itself in all spheres of the individual's behavior. In the mental sphere this retardation in development is revealed by the persistence of infantile traits, a childlike emotional affective disposition, stubbornness, suggestibility, and characteristic propensity to mimic the behavior of others. The productive behavior, and hence the occupational potentialities of mongoloids, remains at the level of their mental age, which usually remains below 7 years and, without treatment, rarely exceeds 5 years.

The chapters on the nervous system and on endocrine pathology are the core of the book and contain much new and original material which should be of interest, not only from the point of view of pathogenesis of the two conditions discussed but from the point of view of neuropathology and endocrinology in general. The author points out and proves with detailed observations the disturbances in the skeletal growth, especially that of the skull which he considers as highly characteristic in mongoloids. Hand in hand with the cranial malproportions there are characteristic morphologic features in the central nervous system, especially the brain. The cerebral abnormalities manifest themselves in the organogenesis of the brain: flattening and distortion of convolutions, fusion of fissures, and malformations and insufficient myelination of the cerebellum being the outstanding findings. These cerebral and cerebellar abnormalities explain the general hypotonia so characteristic of mongoloids. Metabolic abnormalities in the brain led the author to the conclusion that the chief disorder of metabolism in mongoloids is the deficiency

in oxygenation and carbohydrate metabolism. The disorder of brain metabolism during fetal life results in dwarfism and stunted growth of the nervous system according to the biological laws which govern the arrest of physical growth. In contrast to cretinism in which the pituitary tends to be enlarged, in mongoloids the pituitary is hypoplastic. The author divides the pituitary abnormalities into two groups, those due to failure of differentiation of secretory cells, and those due to the failure of secretory activity. The author regards the endocrine disorder in mongolism as a congenital type of hypopituitarism associated with a congenital gonadal hypofunction. The entire endocrine system and the endocrine regulation of bodily processes is affected. Male gonads show failure of spermatogenesis, testicular hypoplasia, and evidence of degenerative changes. The anomalies in female gonads were as conspicuous and of the same order. Chapter VI deals with general pathology of visceral systems—liver, heart and blood vessels, lungs, kidneys, thymus (always hypoplastic), and with general organ development. Chapters VII and VIII are concerned with the growth and development of the cranium, based on craniometric and x-ray studies of skulls of mongoloids and cretins. In Chapter IX the author presents the results of his extensive biochemical and hematological observations. In Chapter X the relationship between the state of maternal health, age, and birth order of the child and the incidence of mongolism is discussed on the basis of clinical and statistical data supplied by a series of over 300 families and showing that the maternal condition at the time of pregnancy is the decisive factor in the pathogenesis of mongolism. Mongolism occurs under the same conditions which lead to abortion, prematurity, and hormonal sterility. In Chapters XI and XII the author discusses the rationale and methods of prevention and treatment of mongolism. The usefulness and importance of this book far exceed the limits of the narrow field to which it is dedicated.

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TECHNIQUE OF PSYCHOANALYTIC THERAPY. By Sandor Lorand, M.D. (New York: International University Press, 1946.)

This book is the outgrowth of Dr. Lorand's course in technique which he gives regularly at the New York Psychoanalytic Institute.

Outstanding in this book is the absence of any rigid rules. The author consistently stresses flexibility—flexibility implemented by a thorough personal analysis as well as accumulative experience. However, this flexibility must take place within the framework of the Freudian conception of psychodynamics.

Paramount emphasis is laid on the transference situation and its correct analysis. Thus, under chapters headed Anxieties and Phobias, Sexual Difficulties in the Male, Sexual Difficulties in the Female, Compulsion Neuroses, and Neurotic Depressions, the author points out the patterns that transference takes in those clinical categories. The analyst must be ever sensitive to the transference situation and its correct analysis.

The author's chapter on countertransference reflects his great experience in psychoanalytic technique. As a training analyst, he has had the opportunity to observe the innumerable pitfalls of the young analyst, and in this chapter he records the stumbling blocks which are encountered.

This book answers many questions but leaves a good number unanswered. However, the psychoanalysts apparently do not intend to spoonfeed students. Too many broad statements are made which require better elaboration. Analysts, in building up a thesis, have a most disconcerting manner of stating, "Of course, this means . . ." or "it is obvious that . . ." The author is no exception. Unfortunately, those deductions are not as obvious as the author implies. It may be obvious to him and to other trained analysts, but certainly not to the student.

To those who have a good groundwork in Freudian psychoanalysis, this book is highly recommended.

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## IN MEMORIAM

CLARENCE ORION CHENEY

1887-1947

Clarence O. Cheney, a former president of the American Psychiatric Association, died at White Plains, N. Y., on November 4, 1947 at the age of 60 years. He is survived by his wife and son.

Dr. Cheney was born in Poughkeepsie, July 10, 1887, had his preliminary education in the schools of that city, and graduated from Columbia University, receiving an A.B. with honors, in 1908. He pursued his medical course at that university and received his M.D. in 1911. He soon went into neuropsychiatry, serving at the Manhattan State Hospital on Wards Island, where he made notable contributions. His earliest interest was in neuropathology. He embarked on the clinical field and in 1917 became the assistant director of the Psychiatric Institute. He did much to explode the claims of the supporters of the rôle of focal infection, then a point of major interest.

In 1922 he opened Marcy State Hospital, then operated as a division of the Utica State Hospital, on the staff of which he was the assistant superintendent. By competitive Civil Service examination, he was at the head of the list and he was, in 1926, made superintendent of the Hudson River State Hospital at Poughkeepsie, the city of his birth. He had there five years of distinguished administration and, somewhat against his own wishes, he was appointed director of the Psychiatric Institute which in the meantime had become a part of the Columbia-Presbyterian Medical Center occupying a new building erected by the State. It was a difficult task, involving as it did active participation in the evening duties in addition to a full day of supervision and teaching. He began to feel the strain and after five years left New York State service to become superintendent of the Westchester Division of the New York Hospital (Bloomingdale). That was in 1936 and for ten years he directed the activities of that important institution adding lustre to the record of a list

of distinguished predecessors. Continuing ill health caused him to resign in 1946.

Dr. Cheney was a scientist and the broad base of his knowledge made him an outstanding teacher. He was consulting psychiatrist to several hospitals, notably the New York Hospital and Bellevue. He had many academic appointments. After experience as an instructor in psychiatry at Cornell University and Syracuse University, he came to head the department of psychiatry at Columbia during his Institute service and to be professor of clinical psychiatry at Cornell while he was superintendent of the Westchester Division of the New York Hospital.

He was a member of all the local psychiatric societies, ultimately becoming president of most of them, a long-time Fellow of the American Psychiatric Association and after five years as secretary-treasurer, he became its president in 1935-36. He was a Fellow of the American Board of Psychiatry and Neurology and in 1944 was honored by receiving the Columbia University Medal for distinction in Psychiatry. For years he was on the editorial boards of the American Journal of Psychiatry and the Psychiatric Quarterly and he rewrote the medical portion of the Statistical Guide, a widely used publication. The list of his extracurricular activities is long, including the Rotary and Kiwanis Clubs. He liked people, they liked him, and his name and influence were sought in all kinds of civic matters. From nothing of real importance was he excluded.

Cheney was a grand person. His impressive demeanor, his sober judgment, his wide knowledge, and the deep respect of his associates won for him an outstanding place in professional circles. On a holiday or at a festive meal, he was a good companion, too. He was the type which men desire to have on a fishing trip. That tells the story.

Clarence O. Cheney sleeps in the family plot at Poughkeepsie, N. Y., having crowded much into a life too early ended.

FREDERICK W. PARSONS, M.D.

## RICHARD HENRY HUTCHINGS

1869-1947

As it must to all men, death came to Dr. Richard H. Hutchings, on October 28, 1947, after an illness of only a few days. He had been active in his profession except for a brief period prior to his passing, and it may truly be said of him that "he died with his boots on."

He was born in Clinton, Georgia, August 28, 1869. His father, whose name he bore, was descended from a pioneer Georgia family that emigrated from Virginia soon after the American Revolution. His mother, Cornelia Greaves, a native of the same county, was the daughter of Joseph Greaves, a Tennessean, and of Mary Shorter, whose family were prominent in the affairs of Georgia and Alabama.

Shortly after the birth of Richard Henry, the family moved to Macon, Georgia, and Richard had barely reached the age of five when his father died. Being the youngest of six children, his two brothers having died in infancy, his early development was much influenced not only by his devoted parents but especially by three older sisters, from one of whom he acquired a love of flowers that he retained to the end; from his second sister, who was one of the teachers in a small private school in Macon that he attended, his intense interest in the classics.

In 1887, at the age of eighteen, he graduated from Middle Georgia Military School at Milledgeville and, after a year in Georgia University, entered Bellevue Medical College, receiving his degree of Doctor of Medicine in 1891. Followed a year of internship at the Almshouse Hospital on Blackwell's Island and his appointment in April, 1892, as physician to the City Asylum on Ward's Island (now Manhattan State Hospital).

Here he came under the influence of Dr. William Austin Macy, one of the pioneer superintendents in what is now the New York State Department of Mental Hygiene, who recommended him to Dr. Wise, then superintendent of the new state hospital at Ogdensburg, N. Y. Thus on May 24, 1892, Dr. Hutchings became a member of the staff of the St. Lawrence State Hospital, where he rapidly passed by promotion through the various grades. In September, 1903, at the

early age of thirty-four, he was made superintendent, remaining in that position until, in February, 1919, he was appointed superintendent at the Utica State Hospital.

He very early in his career manifested unusual scientific interest and curiosity, evidence of which we find in his investigation in 1903 of the cause of a typhoid epidemic at the hospital when he demonstrated, for the first time on record, that typhoid bacilli could be carried in ice.

The St. Lawrence State Hospital, under Dr. Hutchings' superintendency, grew rapidly in patient population and in its facilities and efficiency. He was one of the first superintendents to recognize the advantages of voluntary admissions, as a result of which the rate of such admissions at St. Lawrence exceeded that of most, if not all, of the other state hospitals.

In 1909, the first regularly conducted clinic at a New York state hospital for advice and treatment of community patients was established by Dr. Hutchings at Ogdensburg. He was likewise a pioneer in providing habit training and recreation for the otherwise idle and deteriorated patients; and he assigned a trained musician to promote the dissemination of music throughout the hospital wards. In 1907, he headed a committee to revise the statistical tables and to formulate recommendations for the preparation of annual reports, and he continued as chairman of the permanent Committee on Statistics and Forms until his retirement from the state service.

Dr. Hutchings made an enviable record in the Medical Corps, U. S. Army, during World War I, serving in various important capacities from August, 1917, to February, 1919, attaining the rank of major.

Coming to the Utica State Hospital in 1919, in addition to his many duties and activities there he directed the construction and development of the Marcy State Hospital until 1931, when by legislative action it was made a separate hospital.

Dr. Hutchings was a natural-born leader and administrator. He was President of the Associated Charities in Utica (now the Family Association) and President of the Torch Club of Utica. Under his guidance the train-



ing school for nurses at St. Lawrence State Hospital was developed to a high degree of efficiency. Shortly after coming to Utica he assisted in the organization, and was first President of the Board, of the Central Training School for Nurses, in which state hospital nurses secure their preliminary training with pupil nurses of the general hospitals of Utica.

From 1908 until he retired in 1931, he was lecturer in psychiatry with the College of Medicine of Syracuse University; and in 1933, as a token of appreciation for his many years of service on the teaching staff, he was appointed Professor Emeritus of Clinical Psychiatry. He was eminently qualified as a teacher, not only because of his wide clinical experience but more especially by virtue of his broad culture and charm and a deep sense of humor that added zest to his presentation. These qualities went far to account for his professional achievement and endeared him to a multitude of students, friends, and professional colleagues.

In order to perpetuate his name and memory at Syracuse University there was organized, in 1933, an undergraduate medical society, the first of its kind at this institution, known as the Richard H. Hutchings Psychiatric Society. By his presence at its meetings and his kindly counsel, he contributed much to the healthy growth of this outstanding milestone in psychiatric progress in the college.

Beyond the stimulating influence he exerted upon the students of the College of Medicine, he contributed an even greater influence upon the young men whom he gathered about him to constitute his medical staff in the hospitals that he served as superintendent. Many of these physicians have won distinction in the field of psychiatry, and not a few are, or have been, heads of institutions in this or other states.

His interest and achievements in the field of community education along mental hygiene lines cover many years. One need only glance at the annual reports of the Utica State Hospital to gain some idea of the vast number of groups he has met in the capacity of lecturer and the many educational committees he headed or actuated by his influence.

While he may not have been one of our

most prolific writers, he did contribute much to psychiatric thinking, as editor, since July, 1935, of the *Psychiatric Quarterly*, the official organ of the New York State Department of Mental Hygiene. His *Psychiatric Word Book*, which went through six editions, was the result of many years of careful thought and earnest research.

Dr. Hutchings served a most successful year as President of the American Psychiatric Association, 1938-1939, and his wise judgment was always subsequently sought as a member of the Council.

In 1939, he retired from the New York State Hospital system after 47 years of distinguished service. He continued in the practice of psychiatry, however, in Utica, until the time of his passing.

Dr. Hutchings' life was influenced by a happy and harmonious family. In 1903, he married Lillie Beall Compton, whom he had known and admired as a girl with her hair down her back. She had come from a prominent Georgia family, her grandfather having been comptroller of the state during the confederacy.

Three children were born to them. Richard Henry, Jr., was a psychiatrist of note in his own name, whose tragic early death from coronary thrombosis in 1938 was a severe blow to his parents and his many friends. His son, who carries on the family name as Richard IV, was born in 1921. Dr. Hutchings' second son, Charles Wyatt, is assistant director at the Manhattan State Hospital where his illustrious father began his psychiatric career in 1892. The third child, Dorothy Compton (Mrs. Raymond N. Alberts), is a psychiatric social worker with the Family Welfare Society of Schenectady, N. Y.

Only those of his many friends who had the privilege of knowing Dr. Hutchings intimately can really appreciate his many sterling qualities. He was a "real person." A man, coming from pioneer stock, making the most of his heritage, he stood as an eminent physician and psychiatrist whose "footprints on the sands of time" will be guide posts to those whom he has left behind, as well as to future generations yet to come.

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